

This folder contains
PLANS
for Constructing
DAIRY BARNS
and EQUIPMENT

Compliments of
 **WIRTHMORE**
DAIRY SERVICE DEPARTMENT

Digitized by:



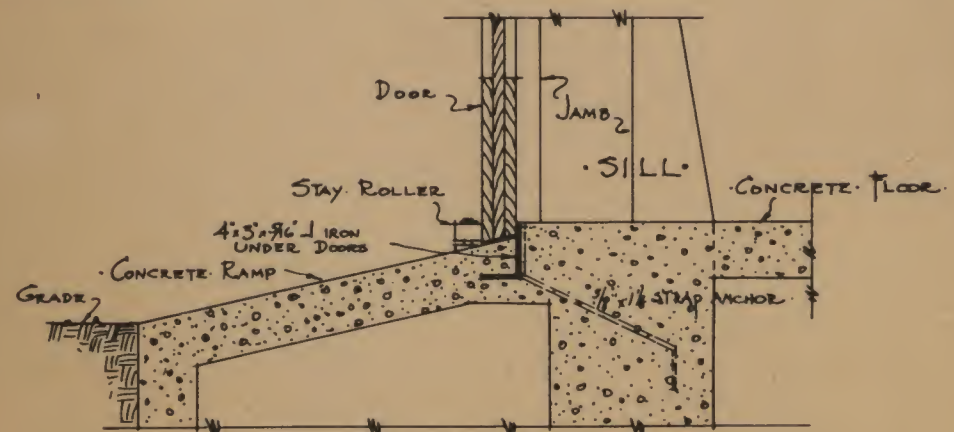
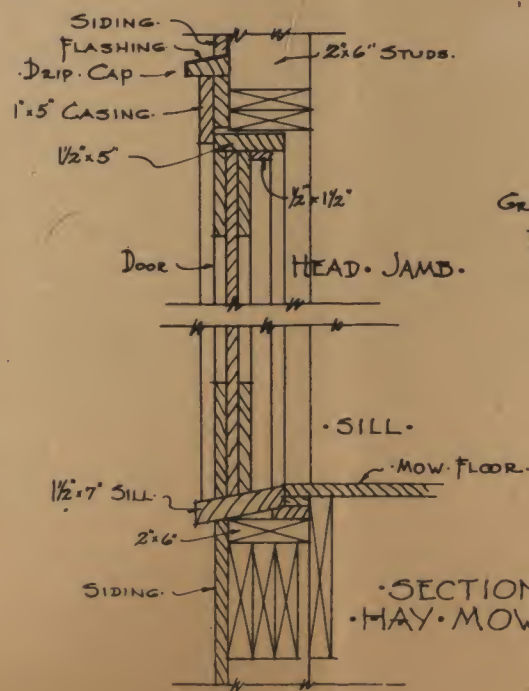
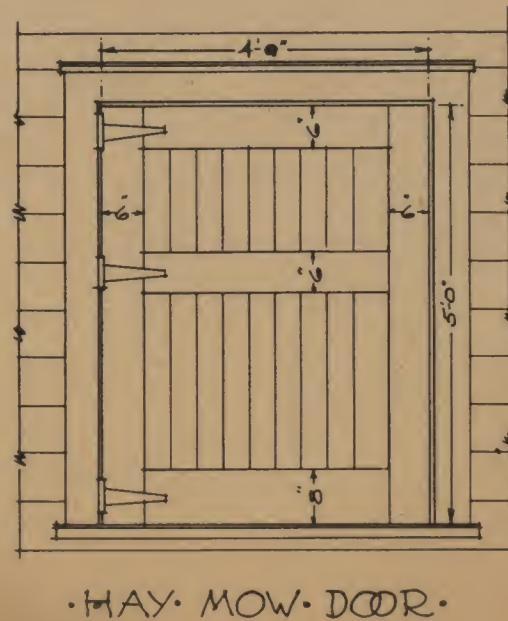
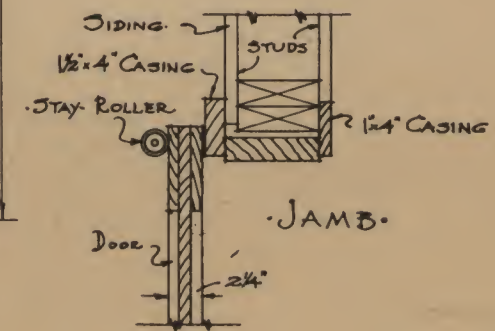
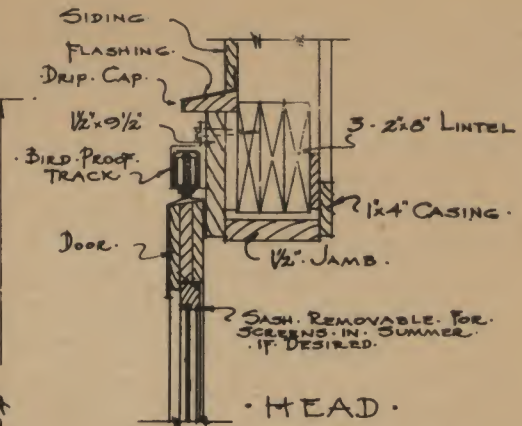
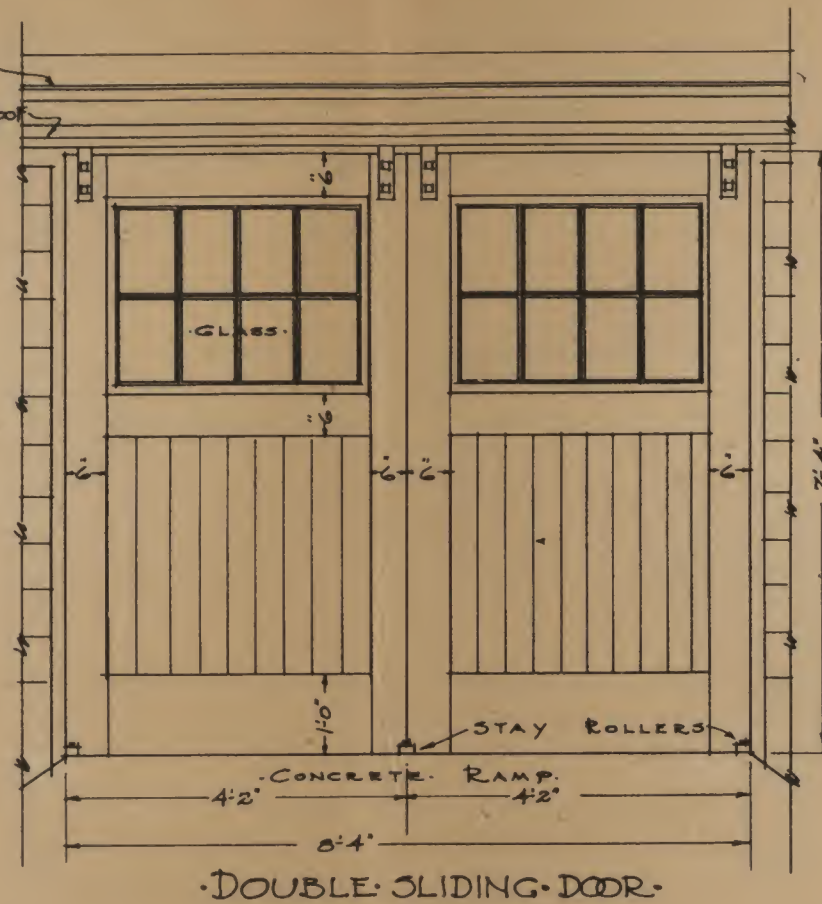
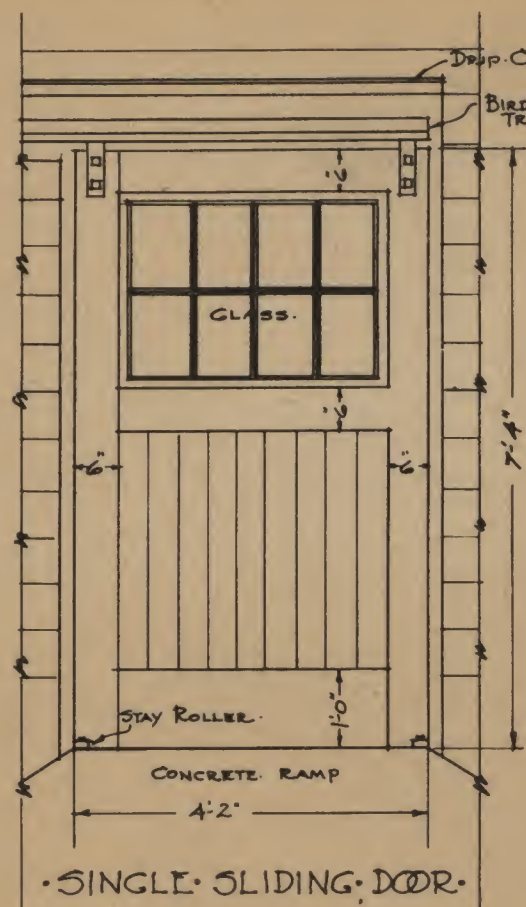
The Association for Preservation Technology, Int.

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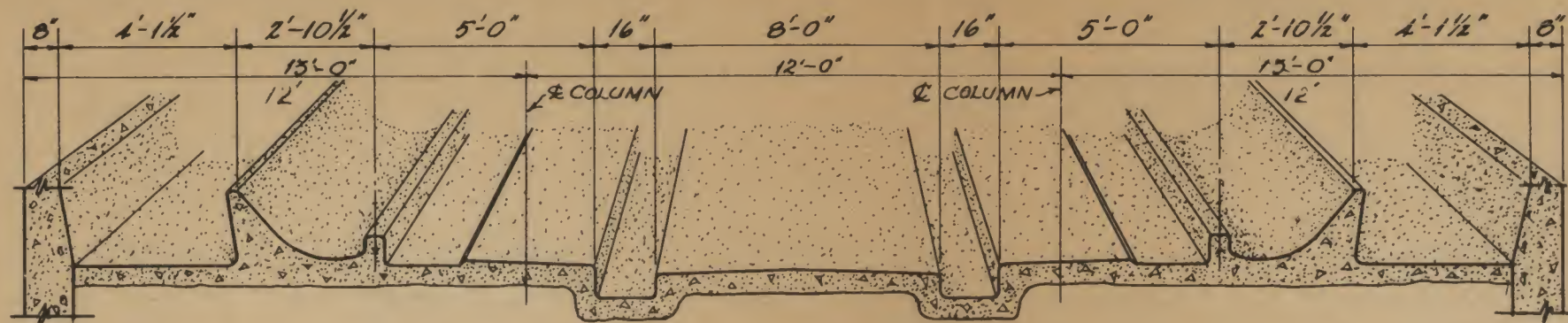
Floyd Mansberger

Fever River Research

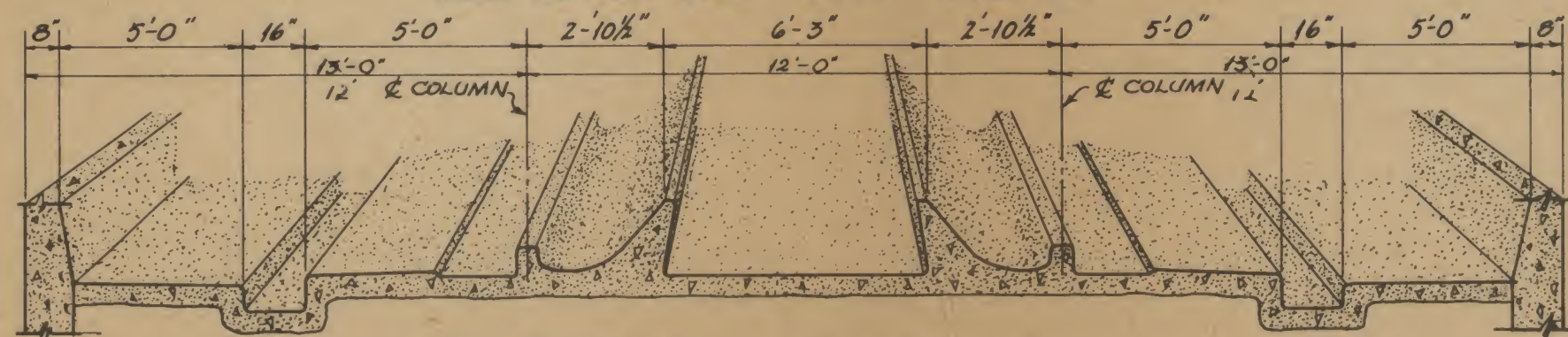
www.IllinoisArchaeology.com



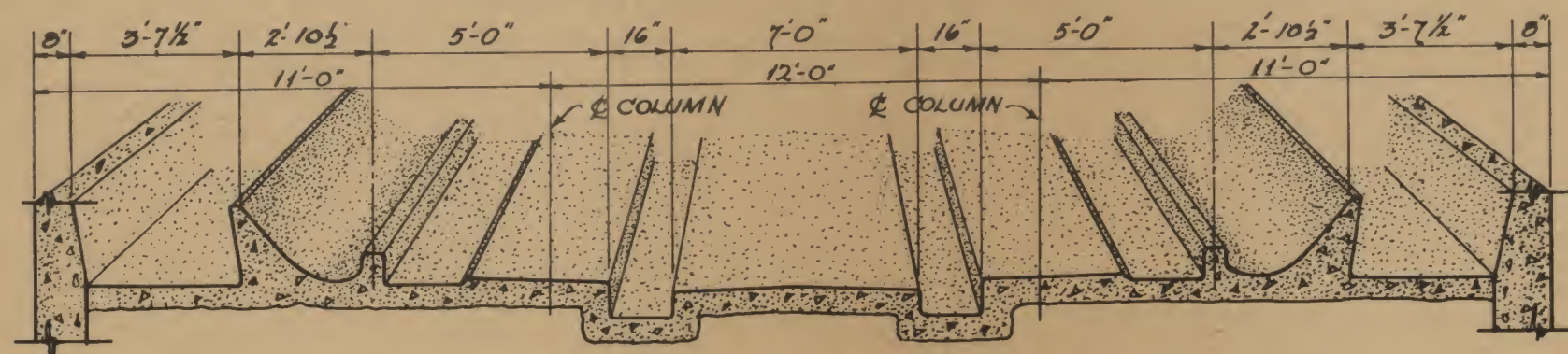
• CO-OPERATIVE • EXTENSION • WORK •
• AGRICULTURE • & • HOME • ECONOMICS •
• STATE • OF • MASS •
DEPT. OF AGRICULTURAL • ENGINEERING •
MASS. STATE • COLLEGE • - AMHERST • MASS •
AND •
U. S. D. A. • CO-OPERATING •
• SLIDING • DOORS • & • HAY • MOW • DOOR •
• DAIRY • BARN •
MASS. 34. PLAN. 570-C SHEET OF



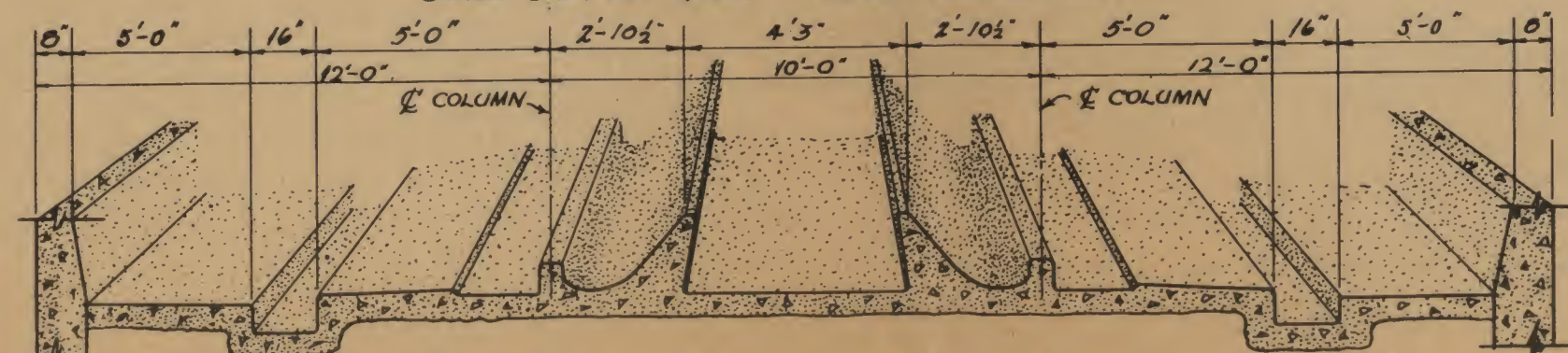
BARN 36 FEET WIDE - COWS FACING OUT



BARN 36 FEET WIDE - COWS FACING IN



BARN 34 FEET WIDE - COWS FACING OUT



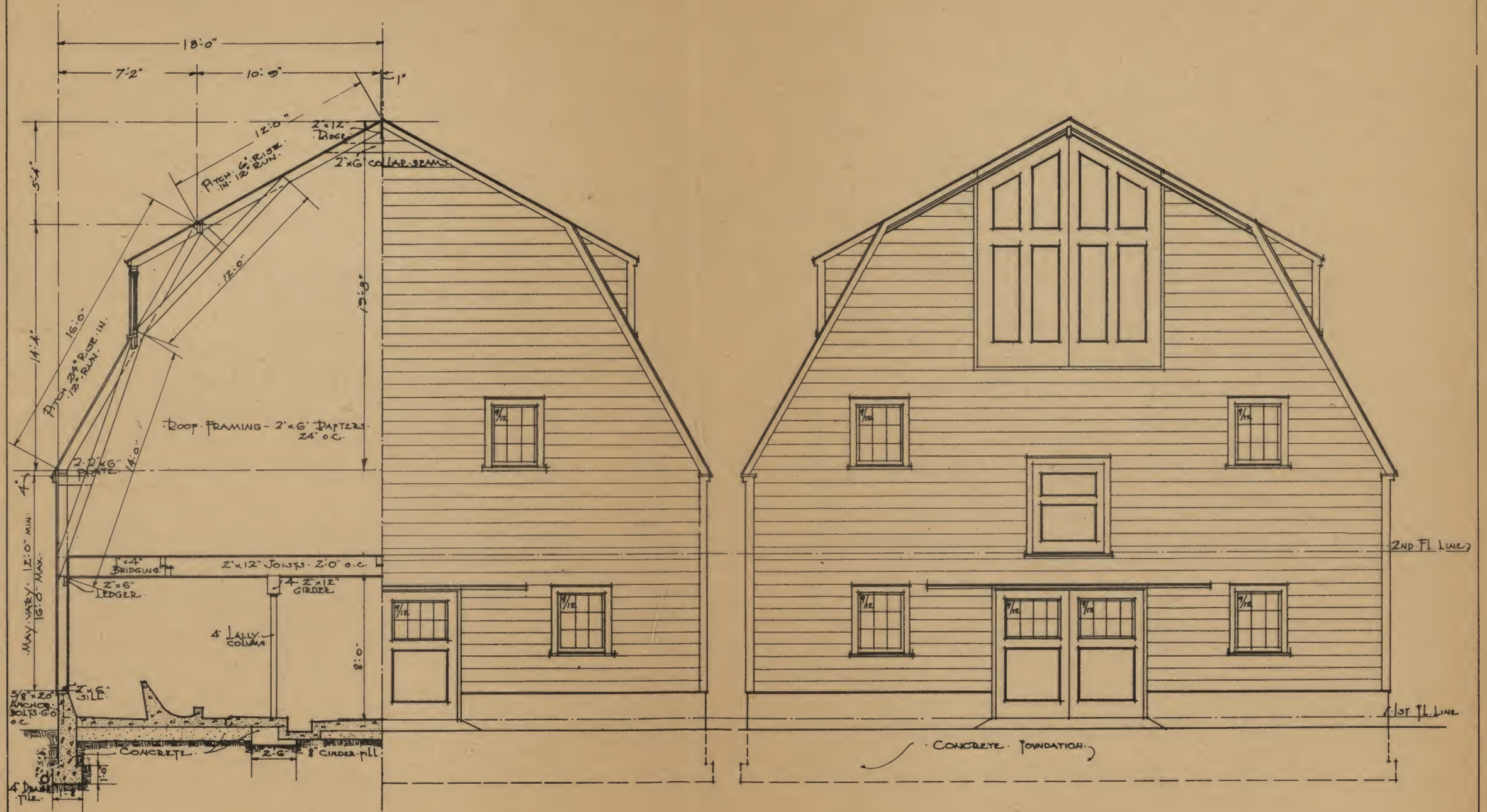
BARN 34 FEET WIDE - COWS FACING IN

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MASSACHUSETTS
MASSACHUSETTS STATE COLLEGE
AND
U.S. DEPT. OF AGRICULTURE COOPERATING
EXTENSION AGRICULTURAL ENGINEER, AMHERST, MASS.

DES. BY
V. C. HARRINGTON

SHEET OF SHEETS

EXCHANGE PLAN NO 544-C



1/2 SECTION

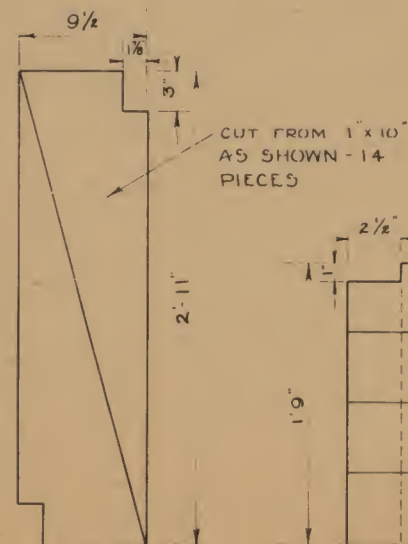
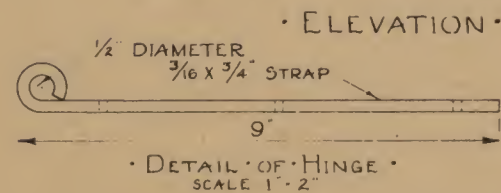
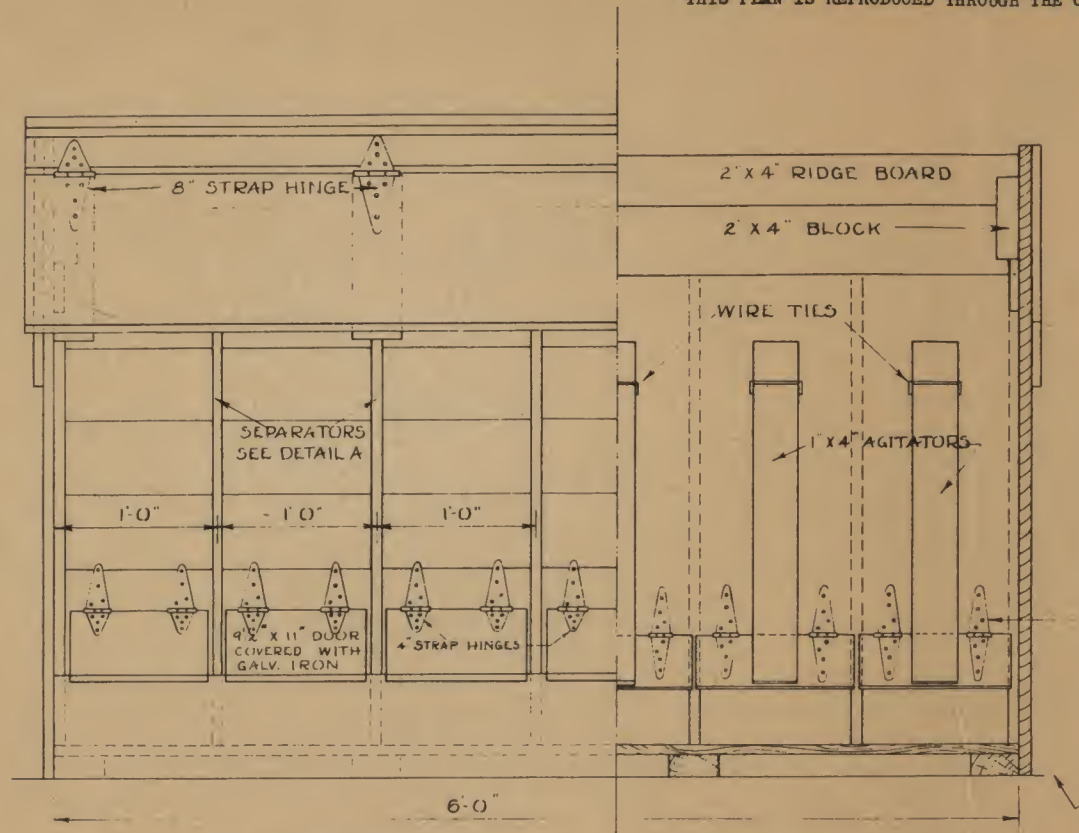
1/2 SOUTH ELEVATION

NORTH ELEVATION

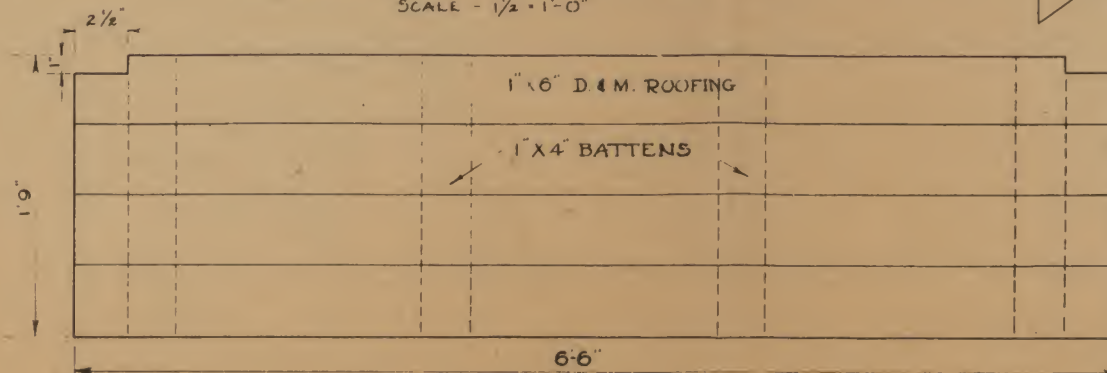
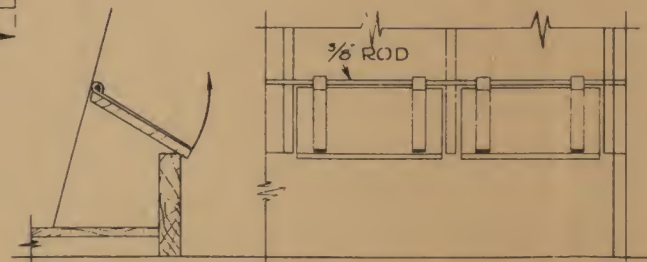
SCALE 1/4" = 1'-0"

CO-OPERATIVE EXTENSION WORK
 AGRICULTURE & HOME ECONOMICS
 STATE OF MASS.
 DEPT. OF AGRICULTURAL ENGINEERING
 MASS. STATE COLLEGE - AMHERST - MASS.
 AND
 V. S. D. A. CO-OPERATING
 SECTION & END ELEVATIONS
 TWO STORY DAIRY BARN (FACE OUT)
 MASS - 34 PLAN 577-C SHEET OF

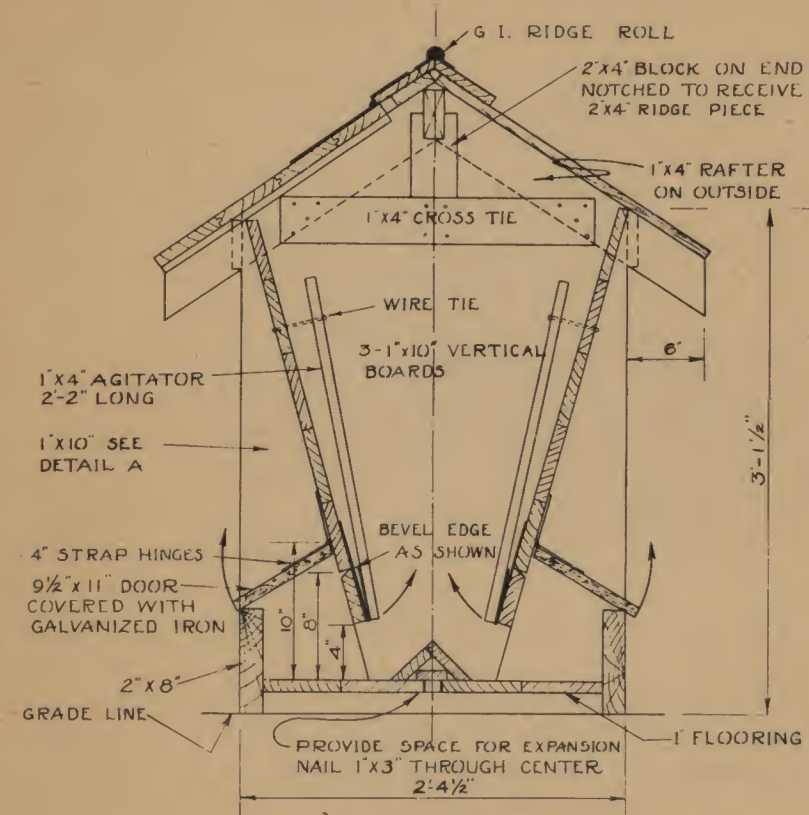
NOTE: SEE FLOOR PLANS FOR EXACT LOCATION OF OPENINGS



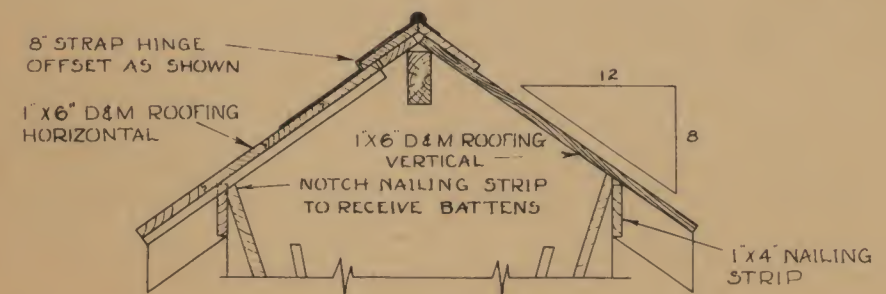
DETAIL A
 SCALE 1 1/2" = 1'-0"



DETAIL OF DOOR
 SCALE 1 1/2" = 1'-0"



SECTION
 SCALE 1 1/2" = 1'-0"



DETAIL OF DOOR
 SCALE 1 1/2" = 1'-0"

ARK.
 ILL.
 IND.
 IOWA
 KAN.
 KY.
 MICH.
 MINN.
 MO.
 NEB.
 N. D.
 OHIO
 OKLA.
 S. D.
 WIS.

COOPERATIVE EXTENSION WORK IN
 AGRICULTURE AND HOME ECONOMICS
 STATE OF

AND
 U.S. DEPT. OF AGRICULTURE COOPERATING
 EXT. AGR. ENGINEER

HOG SELF FEEDER

8019 TR. 1746 SHEET 1 OF 1 SHEETS

MID-WEST PLAN NO.

77612

MATERIAL LIST

HOG SELF FEEDER-MIDWEST PLAN NO. 77612

LUMBER

ITEM	GRADE	PCS.	SIZE	LENGTH	F.B.M.	PRICE	AM'T
Cross Ties	2 Com.	1	2"x4"	10'-0"	7		
Trough Front	"	1	2"x8"	12'-0"	16		
Flooring	"	1	1"x12"	12'-0"	12		
	"	1	1"x4"	12'-0"	4		
	"	1	1"x3"	6'-0"	2		
Ends	"	1	1"x10"	16'-0"	13		
	"	1	1"x10"	8'-0"	7		
Ridge & Tie	"	1	1"x4"	10'-0"	3		
Partitions	"	1	1"x10"	12'-0"	10		
	"	1	1"x10"	10'-0"	8		
Rafters	"	1	1"x4"	10'-0"	3		
	"	1	2"x4"	6'-0"	4		
Roof (D&M)	1 Com.	5	1"x6"	14'-0"	35		
Nail Strip	2 Com.	1	1"x4"	12'-0"	4		
Battens	"	1	1"x4"	8'-0"	3		
Siding	"	6	1"x6"	12'-0"	36		
Doors	"	1	1"x10"	12'-0"	10		
Agitator	"	2	1"x4"	14'-0"	9		
TOTAL LUMBER					186		

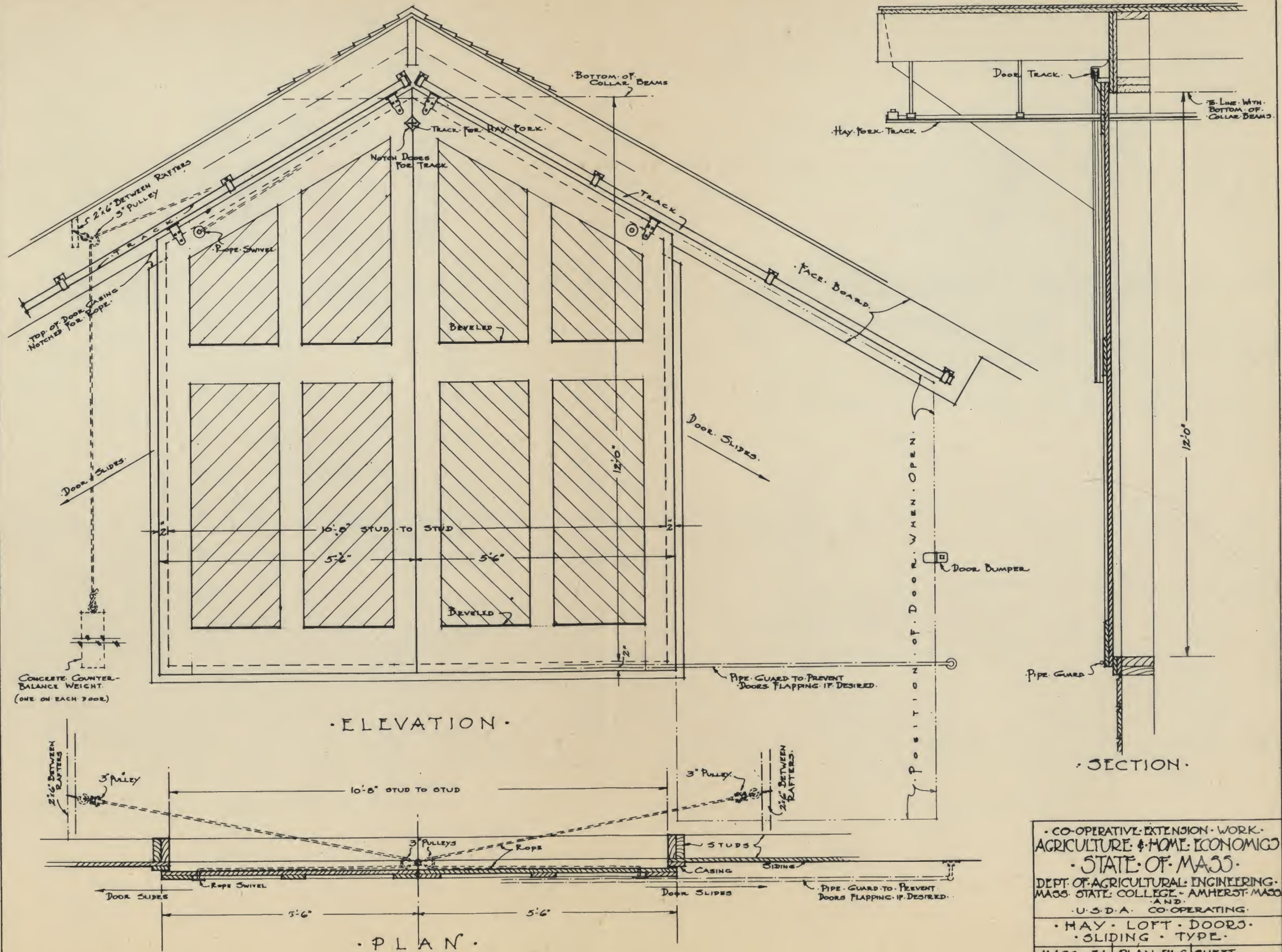
HARDWARE

ITEM	QUANTITY	PRICE	AM'T
Hinges 8" Strap	24		
6" Strap	4		
4" Strap	36		
Wire For Ties	11ft.		
Nails	2#		
Paint	1gal.		

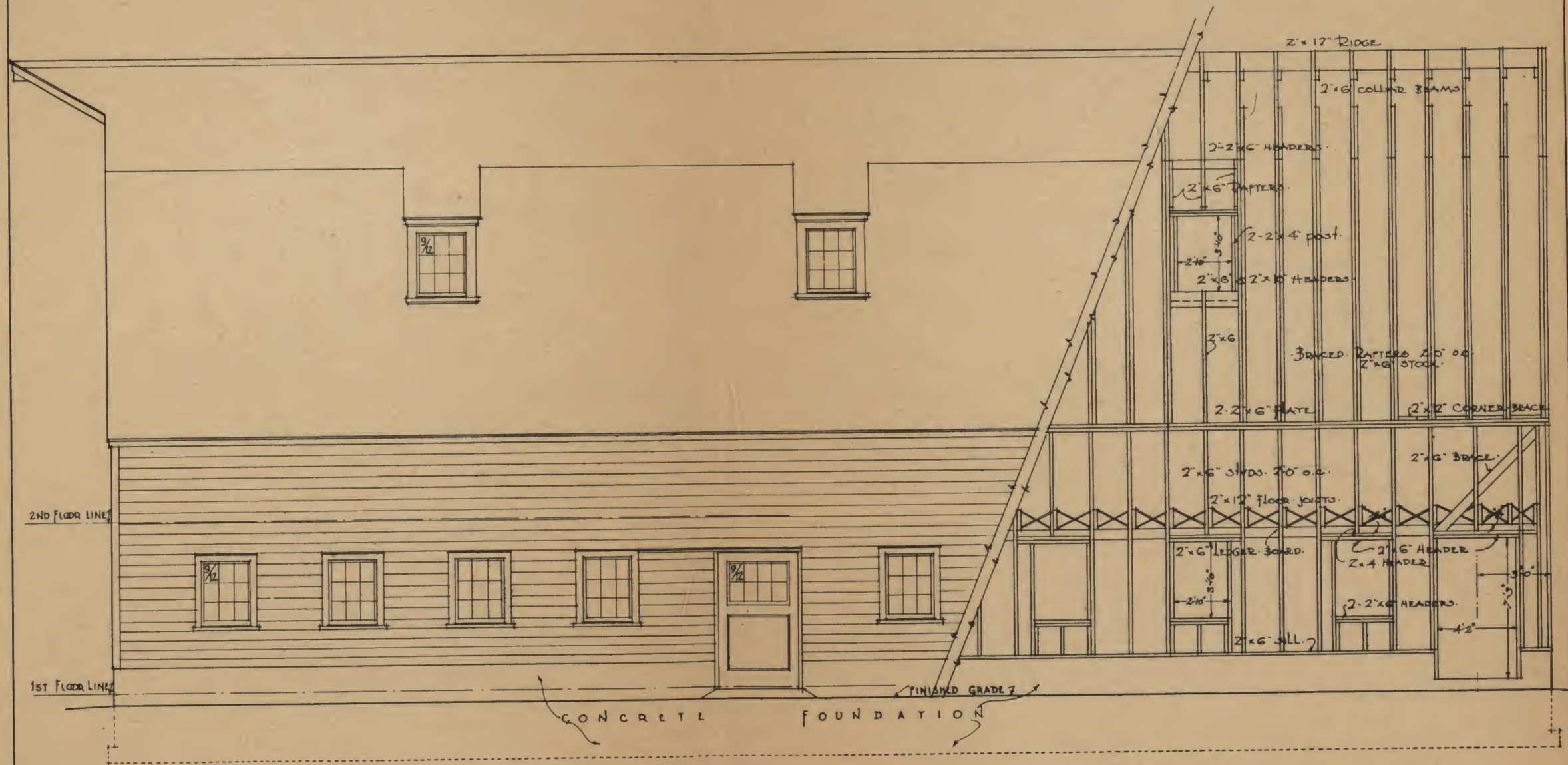
SHEET METAL

ITEM	QUANTITY	PRICE	AM'T
Ridge 6" - 26 gauge G.I.	6'-6"		
Galv. Iron- 26gauge 3'-0"x4'-0"	1		

511C - HAY-LOFT DOORS, SLIDING TYPE



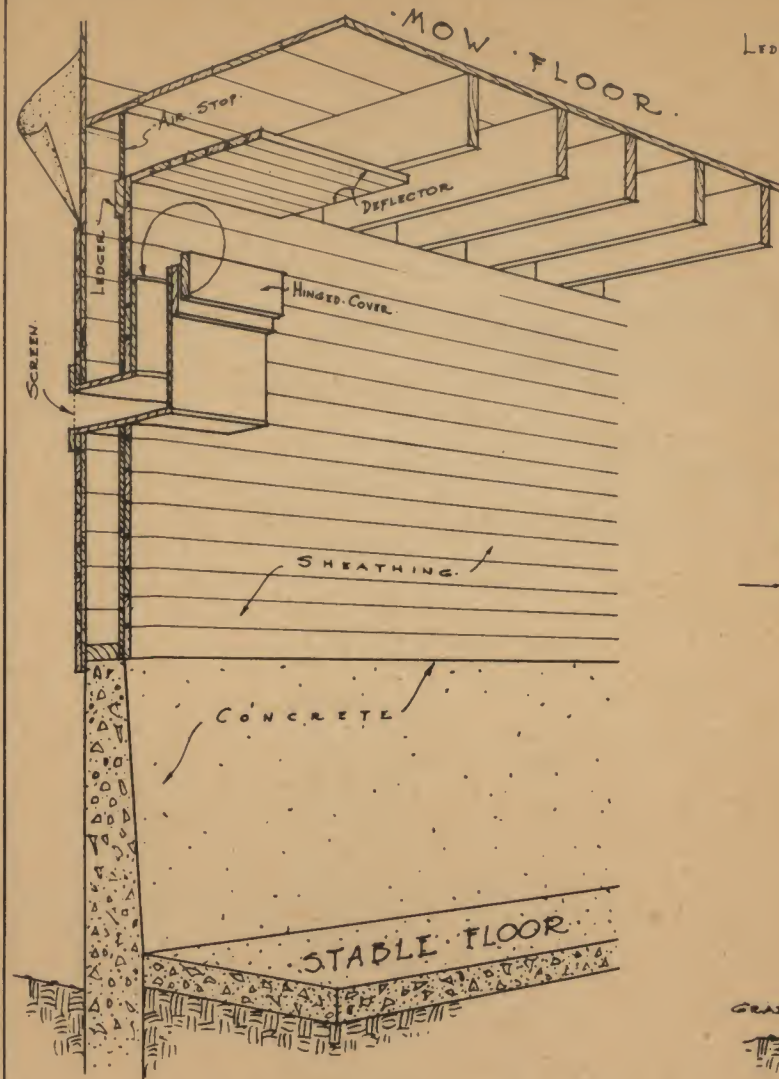
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 • STATE OF MASS. •
 DEPT. OF AGRICULTURAL ENGINEERING
 MASS. STATE COLLEGE - AMHERST, MASS.
 AND
 U.S.D.A. CO-OPERATING
 • HAY-LOFT DOORS •
 • SLIDING TYPE •
 MASS. 34 PLAN 511-C SHEET



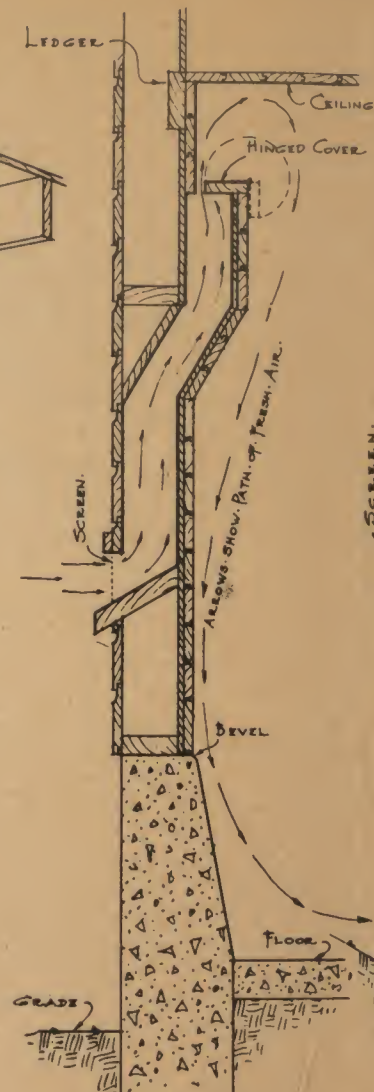
WEST ELEVATION

NOTE. FOR EXACT LOCATION OF OPENINGS.
AND FOR LENGTH OF BARN SEE PLANS.

→ CO-OPERATIVE · EXTENSION · WORK ·
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· DEPT · OF · AGRICULTURAL · ENGINEERING ·
· MASS · STATE · COLLEGE · · AMHERST · MASS ·
AND
· U · S · D · A · CO-OPERATING ·
SIDE · ELEVATION · & · FRAMING ·
TWO · STORY · FACE · OV · DAIRY · BARN ·
MASS · 34 · PLAN 564-C · SHEET OF

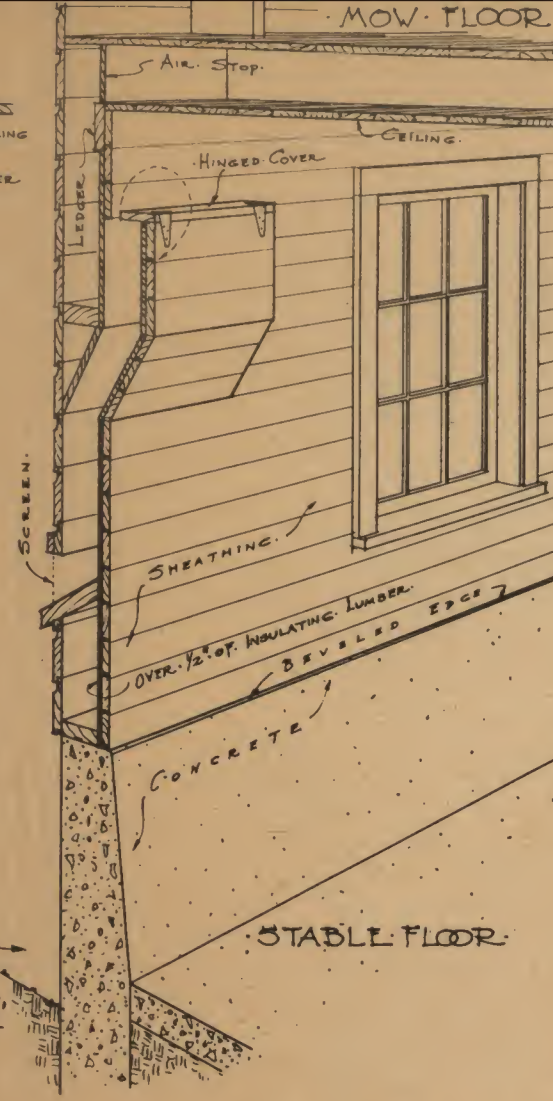


• PERSPECTIVE VIEW •
• FIGURE NO. 1 •
• METHOD OF CONSTRUCTING INTAKES •
• IN OLD STRUCTURES •
• NOTE: DEFLECTOR ON CEILING ABOVE •
• INTAKE OPENING •

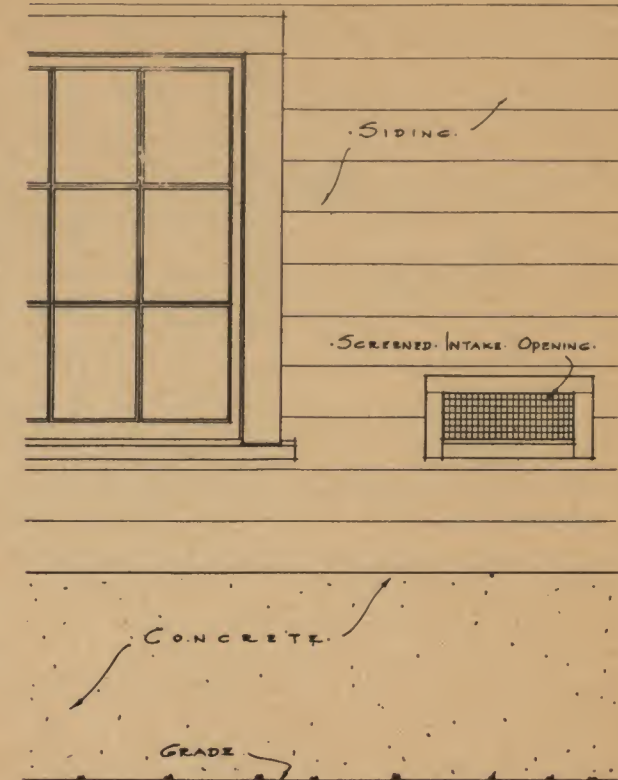


• SECTION •
• FIGURE NO. 2 •
• METHOD OF CONSTRUCTING INTAKES •
• IN NEW STRUCTURES •

• NOT DRAWN TO SCALE •



• PERSPECTIVE VIEW •
• FIGURE NO. 2 •



• EXTERIOR ELEVATION •
• FIGURE NO. 3 •

• ADAPTED FROM DESIGNS OF PROFESSORS FAIRBANKS & GOODMAN OF CORNELL UNIVERSITY •

• CO-OPERATIVE EXTENSION WORK •		
AGRICULTURE & HOME ECONOMICS		
• STATE OF MASS. •		
DEPT. OF AGRICULTURAL ENGINEERING		
MASS. STATE COLLEGE - AMHERST, MASS.		
AND		
• U. S. D. A. CO-OPERATING •		
• VENTILATING DETAILS •		
INTAKES IN WOOD FRAME WALLS		
MASS. 34	PLAN 523-C	SHEET 1 OF 7

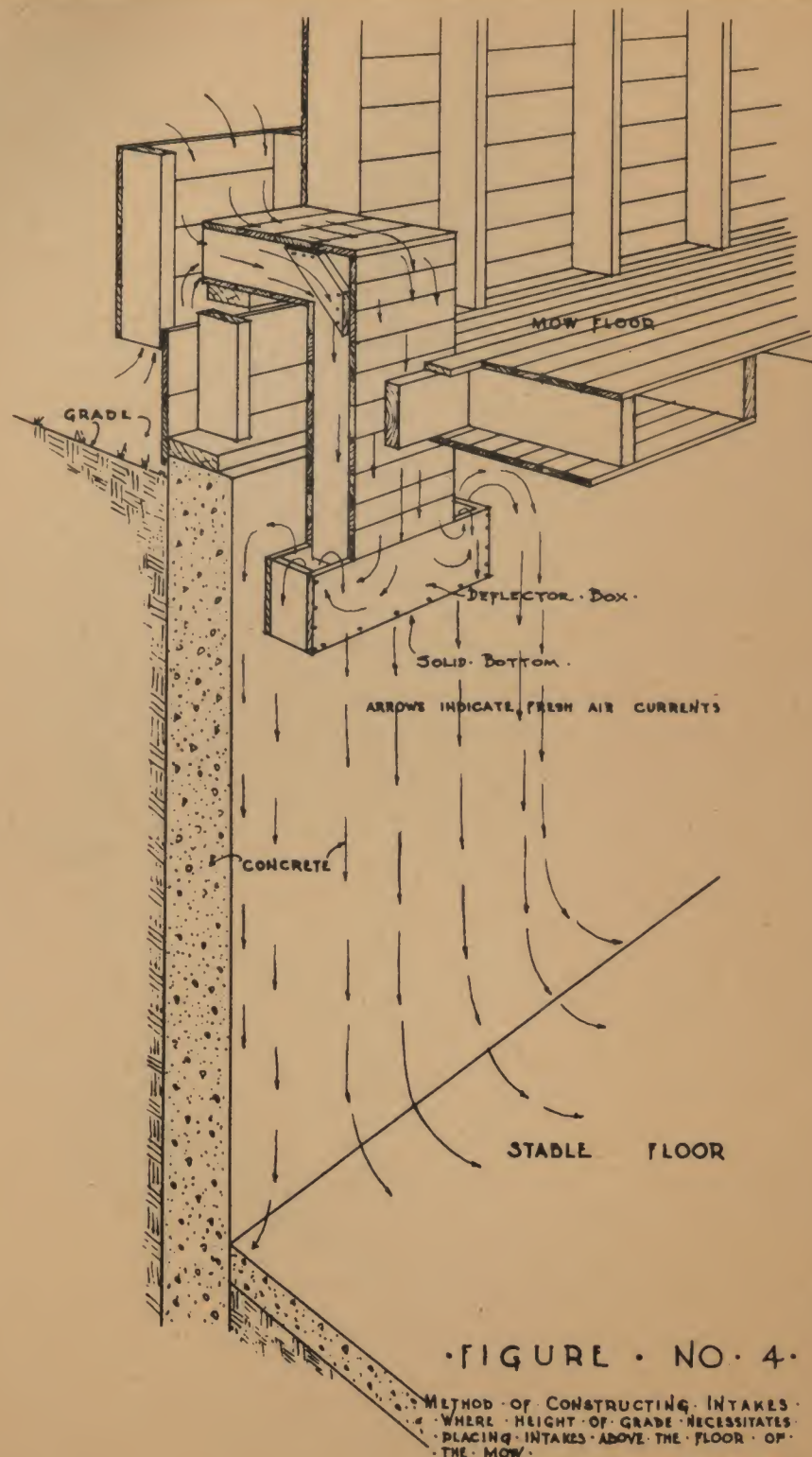


FIGURE NO. 4.

METHOD OF CONSTRUCTING INTAKES WHERE HEIGHT OF GRADE NECESSITATES PLACING INTAKES ABOVE THE FLOOR OF THE MOW.

THESE CONDITIONS APPLY TO BOTH OLD AND NEW STRUCTURES.

NOT DRAWN TO SCALE.

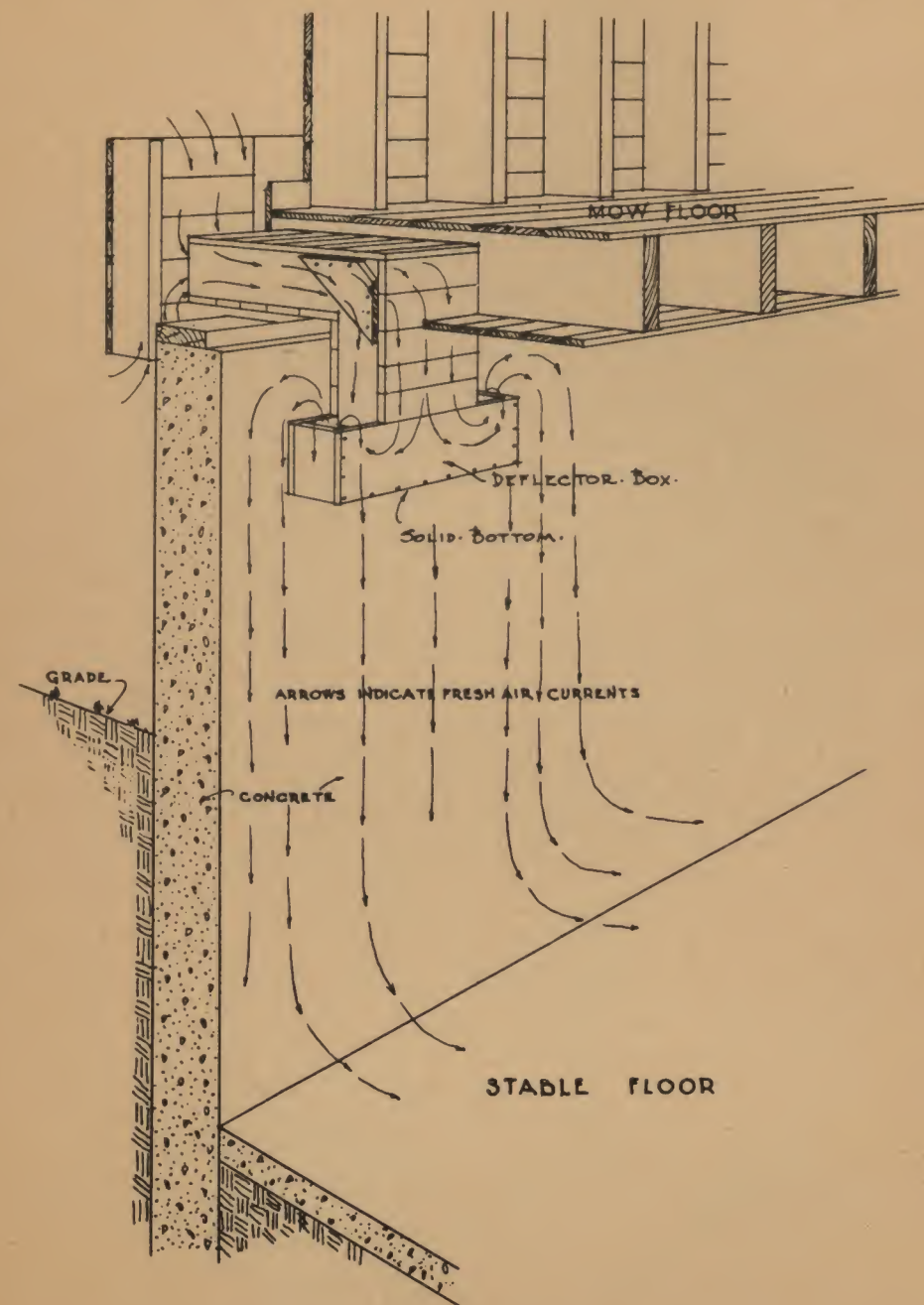


FIGURE NO. 5.

METHOD OF CONSTRUCTING INTAKES WHERE HEIGHT OF GRADE PERMITS THE PLACING OF INTAKES BETWEEN THE MOW FLOOR JOISTS.

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 • STATE • OF • MASS •
 DEPT. OF AGRICULTURAL • ENGINEERING •
 MASS • STATE • COLLEGE • • AMHERST • MASS •
 • U • S • D • A • CO-OPERATING •
 • VENTILATING • DETAILS • •
 • INTAKES • IN • MASONRY • WALLS •
 MASS • 34 PLAN 523-C SHEET 2 OF 7 •

• ADAPTED • FROM • DESIGNS • OF • PROFESSORS • FAIRBANKS • & • GOODMAN • OF • CORNELL • UNIVERSITY •

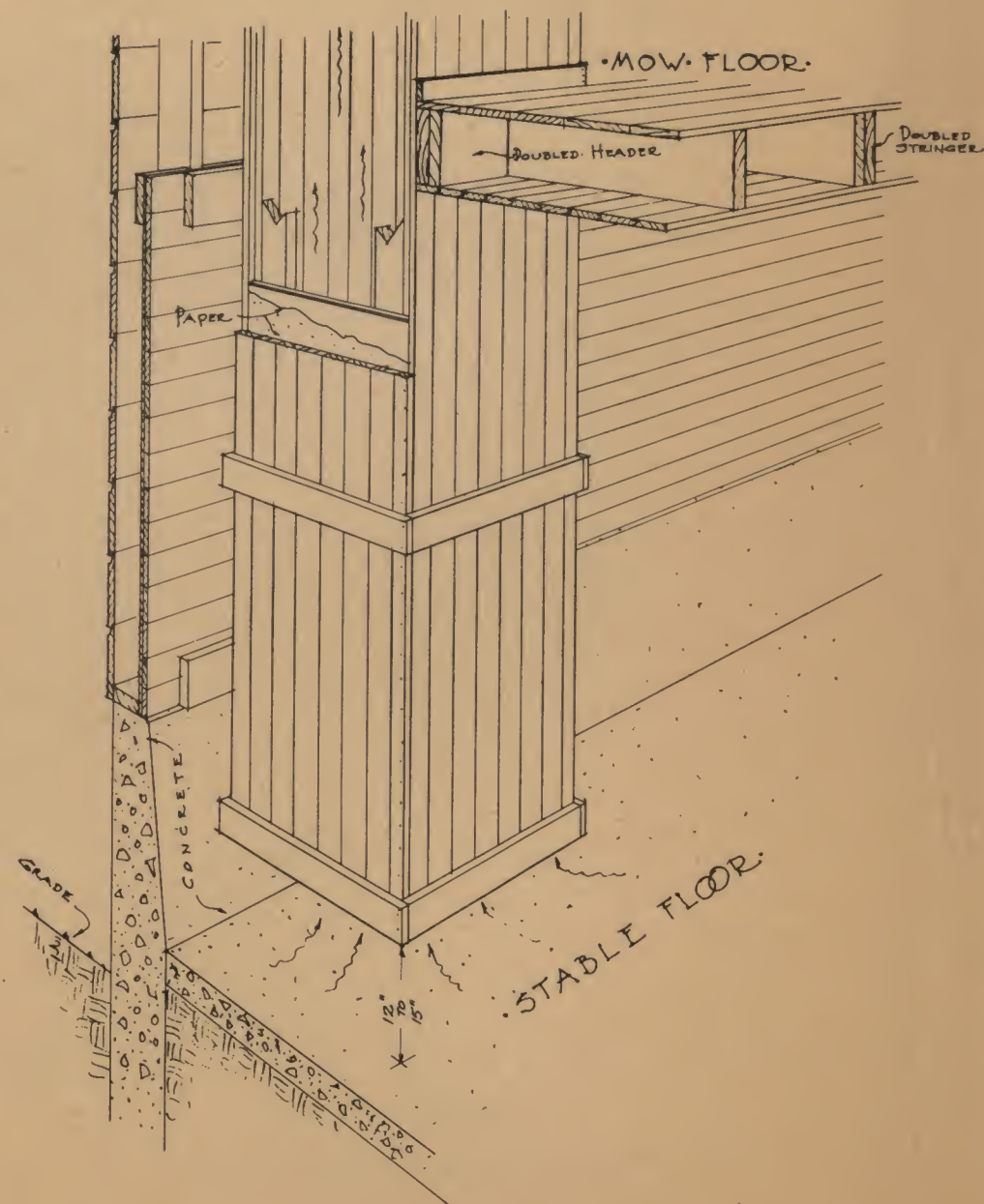


FIGURE NO. 6.
SHOWING CONSTRUCTION OF EXHAUST DUCTS
AT STABLE FLOOR LEVEL.

DETAILS FOR EXHAUST DUCTS INSIDE OF BUILDING.

NOT DRAWN TO SCALE.

ADAPTED FROM DESIGNS OF PROFESSORS FAIRBANKS & GOODMAN OF CORNELL UNIVERSITY.

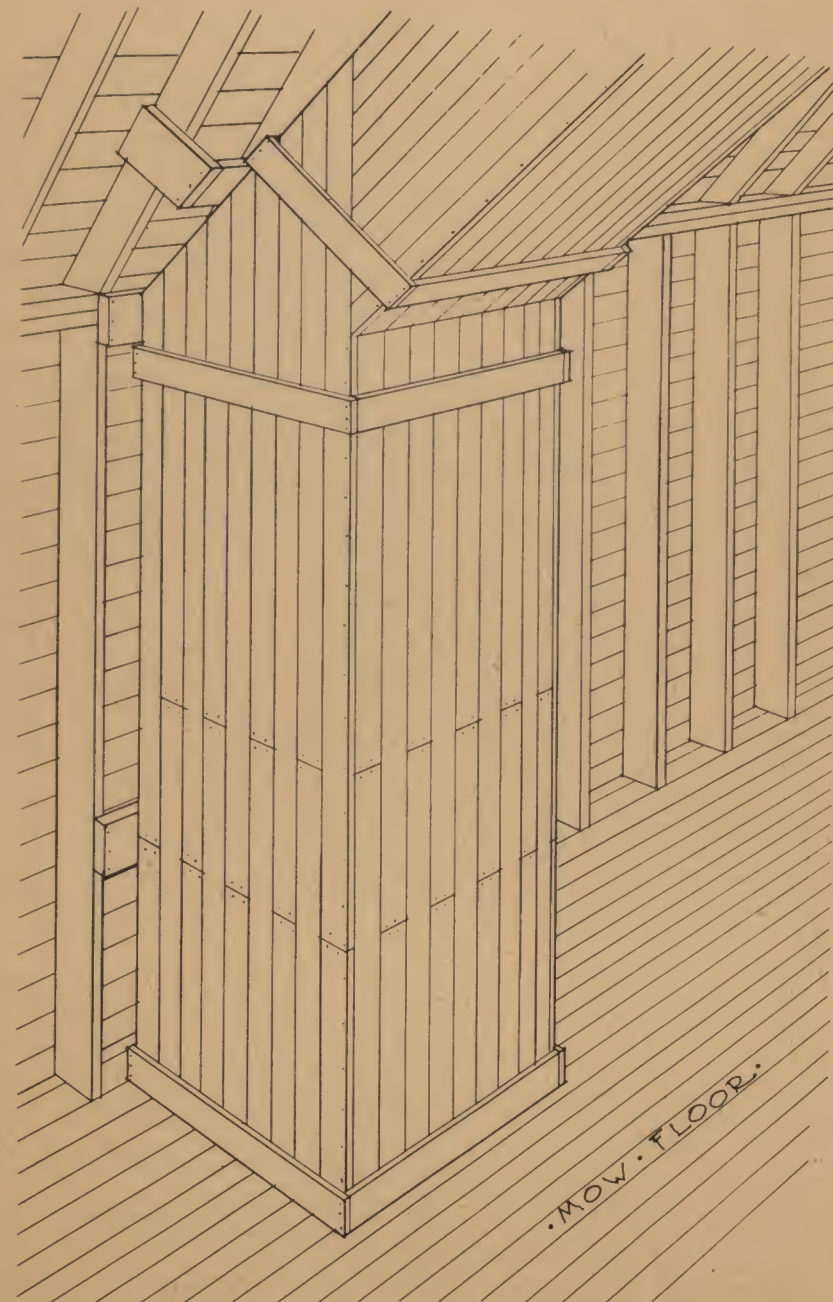
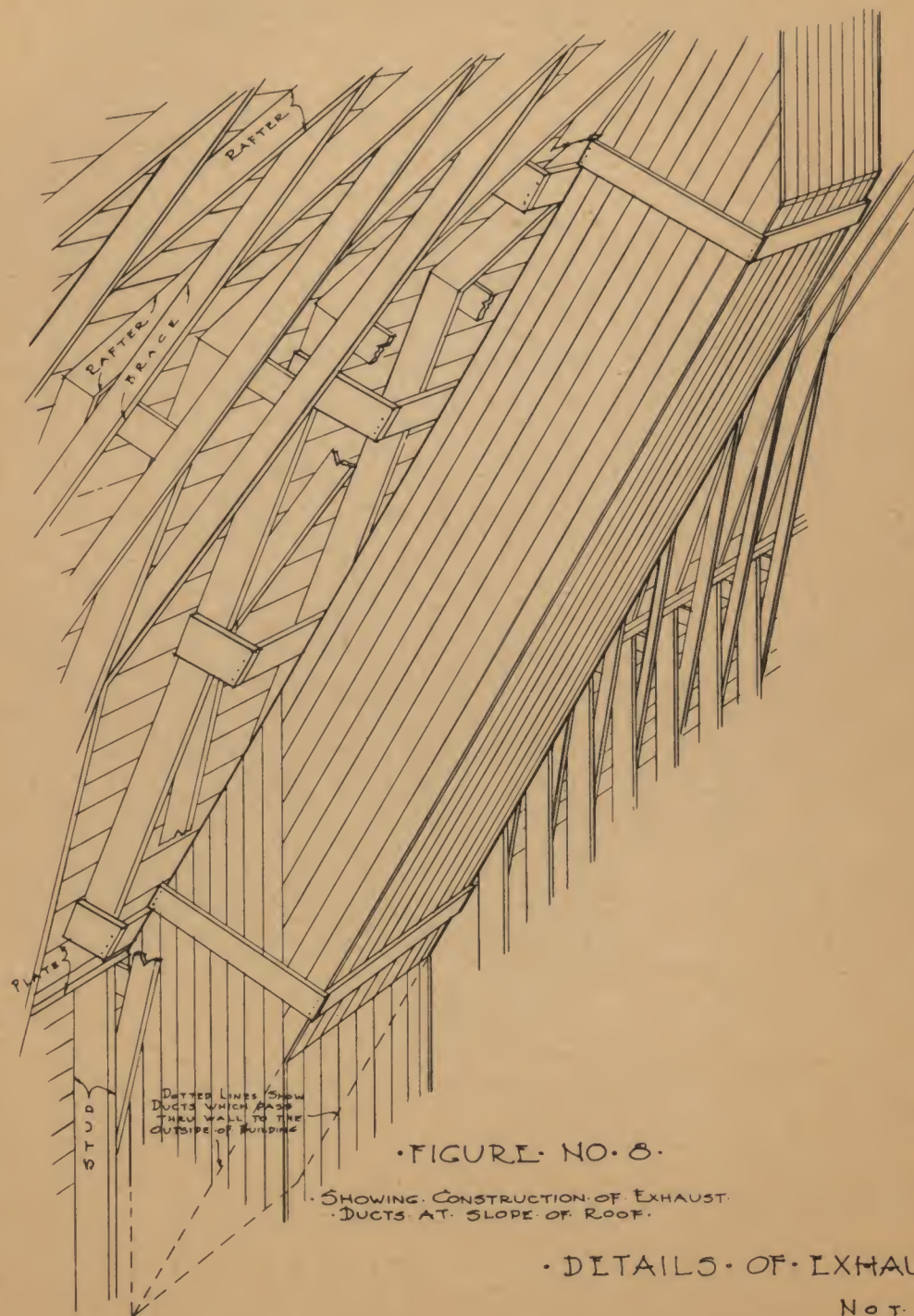


FIGURE NO. 7.
SHOWING CONSTRUCTION OF EXHAUST DUCTS
AT MOW FLOOR LEVEL.

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AGRICULTURE & HOME ECONOMICS
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DEPT. OF AGRICULTURAL ENGINEERING
MASS. STATE COLLEGE - AMHERST, MASS.
AND
U. S. D. A. CO-OPERATING
VENTILATING DETAILS
EXHAUST DUCTS
MASS. 34. PLAN 523-C SHEET 3 OF 7.

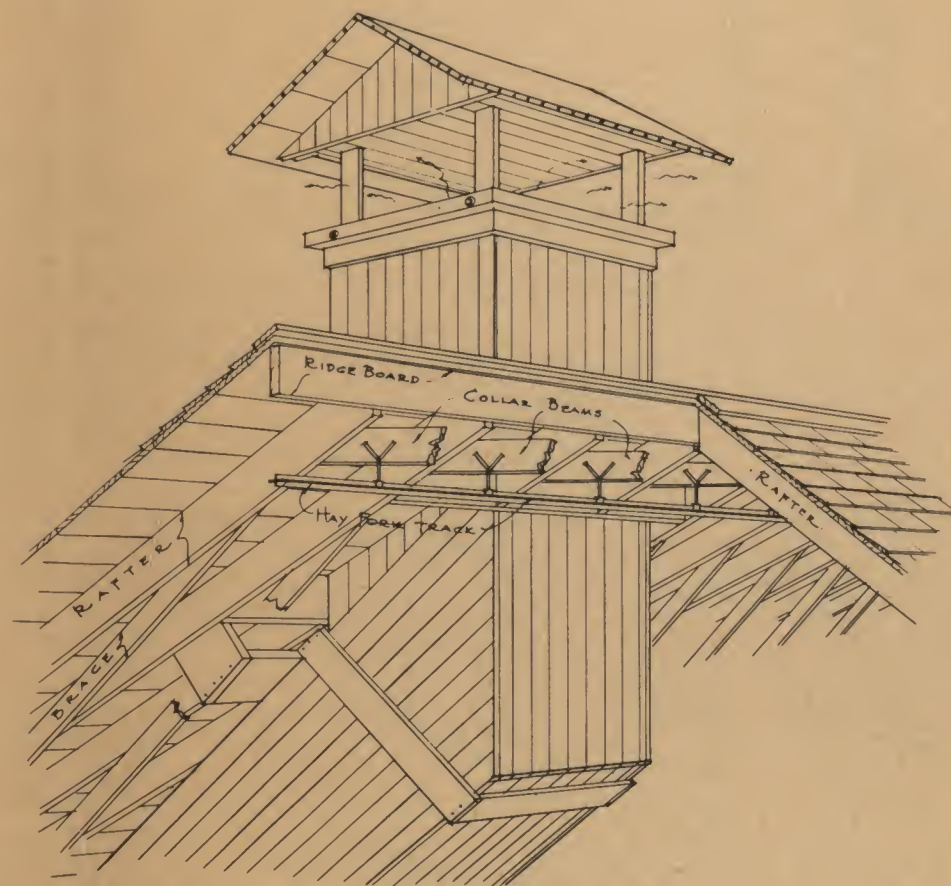


• FIGURE NO. 8 •

• SHOWING CONSTRUCTION OF EXHAUST
• DUCTS AT SLOPE OF ROOF •

• DETAILS OF EXHAUST DUCTS INSIDE OF BUILDING •

NOT DRAWN TO SCALE



• FIGURE NO. 9 •

• SHOWING CONSTRUCTION OF EXHAUST
• DUCTS PASSING THRU ROOF •

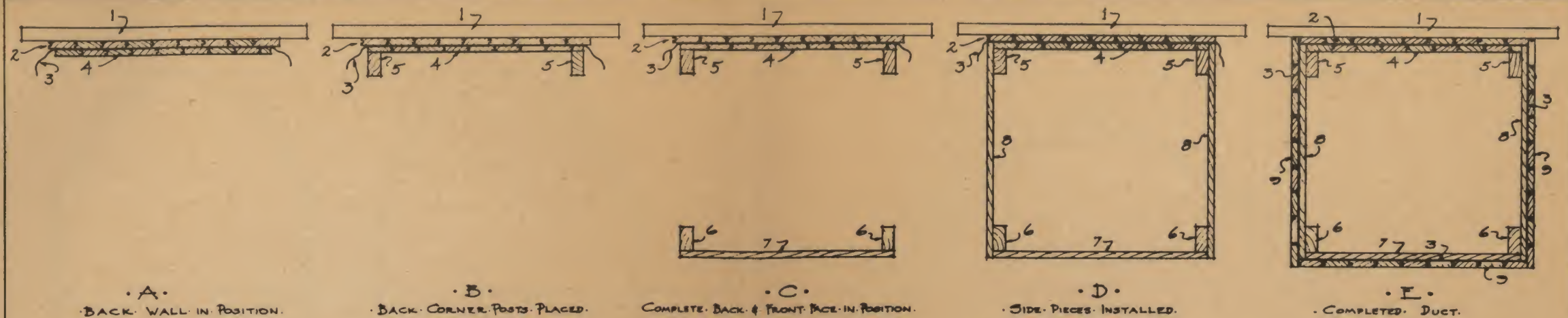


FIGURE NO. 10.
SHOWING METHOD OF CONSTRUCTING VERTICAL EXHAUST DUCTS.

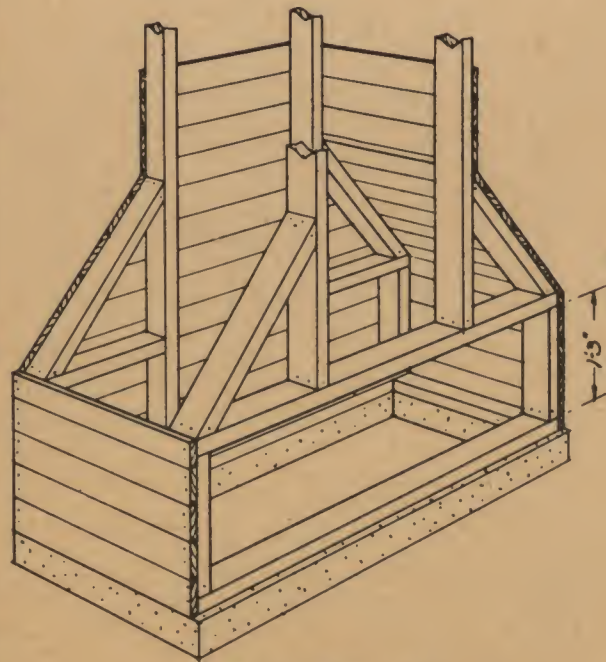


FIGURE NO. 11.
FRAMING FOR EXHAUST DUCT OPENING IN
OUTSIDE WALL OF BUILDING.

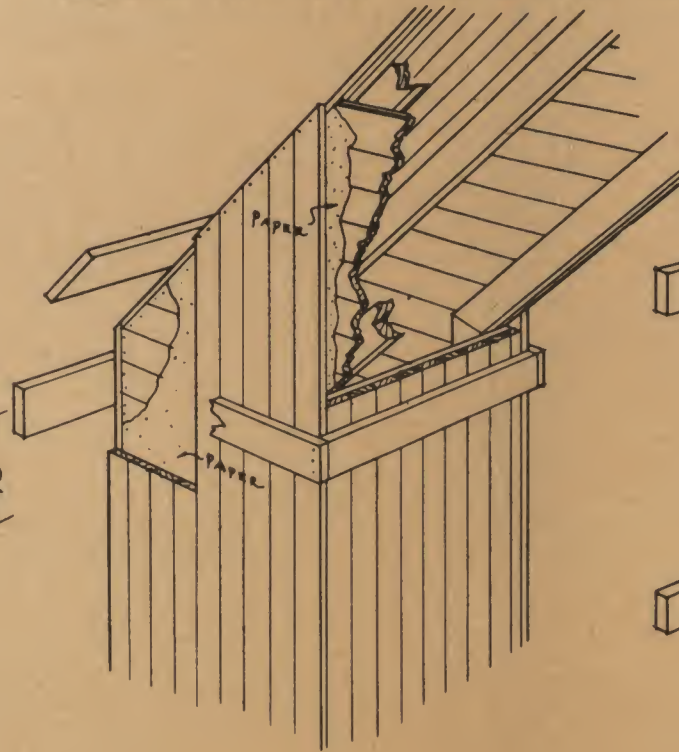


FIGURE NO. 12.
DETAIL AT BEND IN EXHAUST DUCT.

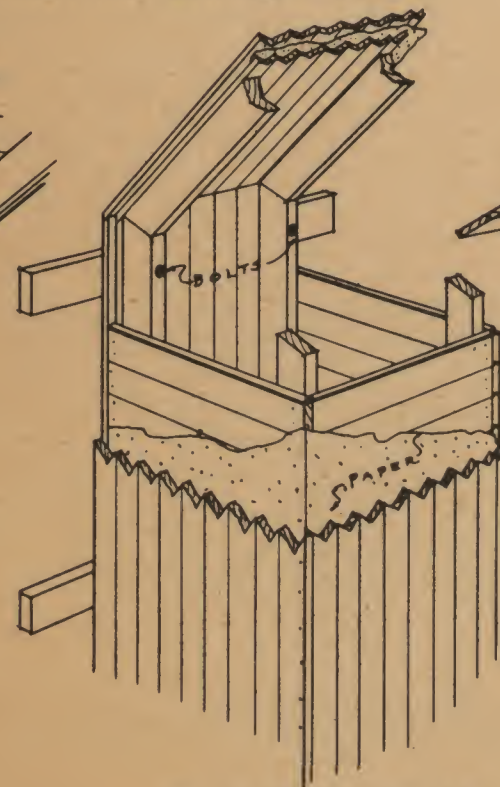


FIGURE NO. 13.
DETAIL AT BEND IN EXHAUST DUCT,
SHOWING CORNER POSTS BOLTED TO SUPPORTING CLEATS.

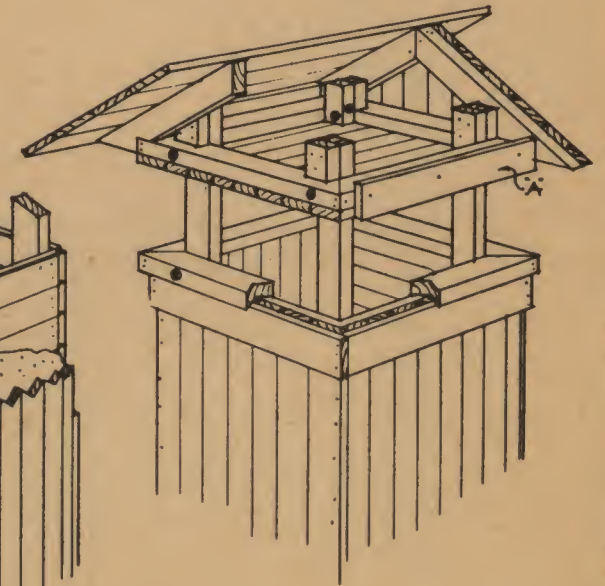
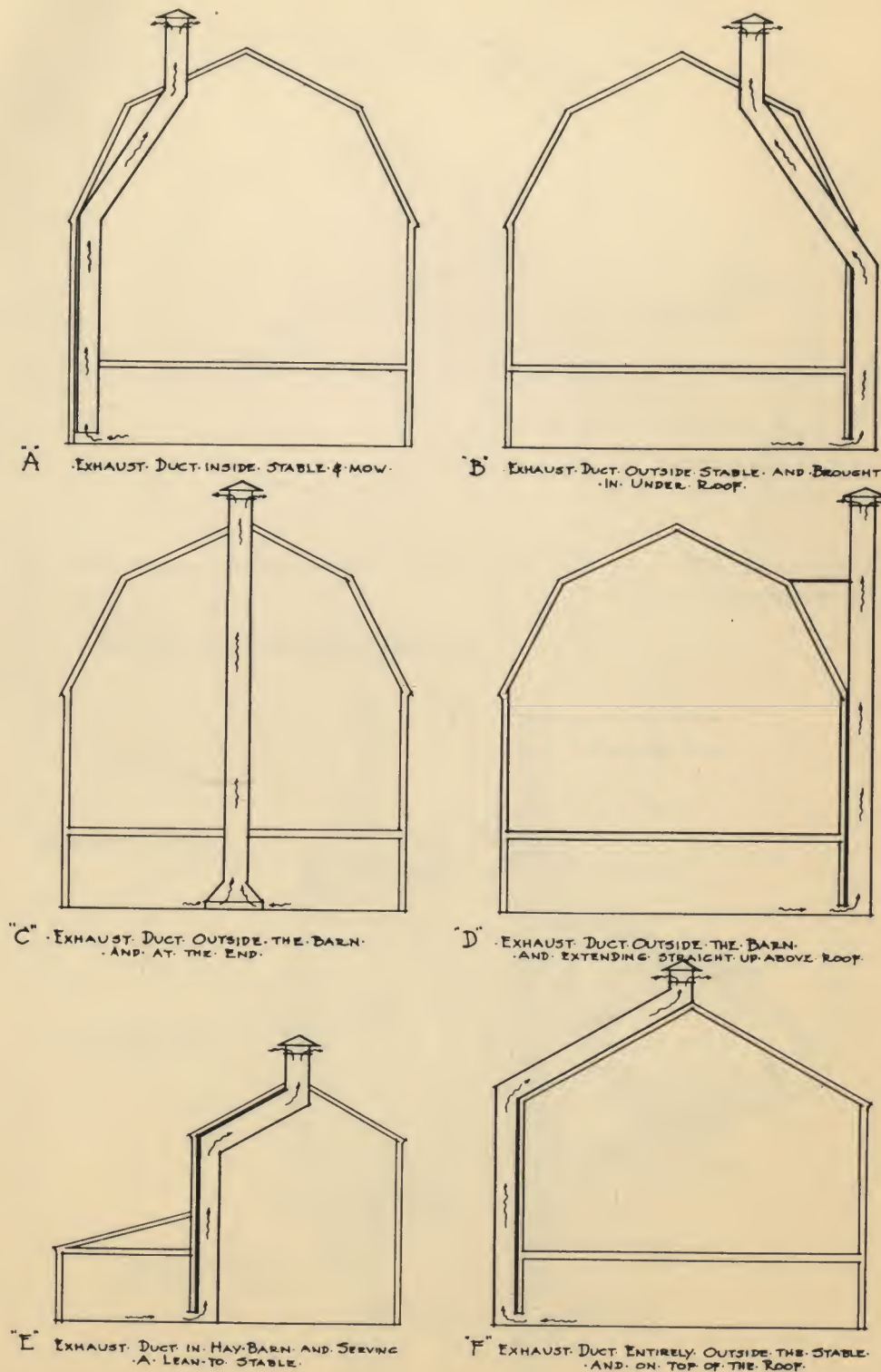


FIGURE NO. 14.
DETAIL OF EXHAUST DUCT HEAD
THE FLAT CEILING IN THIS HEAD
IS ESSENTIAL.

DETAILS OF EXHAUST DUCTS.
NOT DRAWN TO SCALE.

ADAPTED FROM DESIGNS OF PROFESSORS FAIRBANKS & GOODMAN OF CORNELL UNIVERSITY.

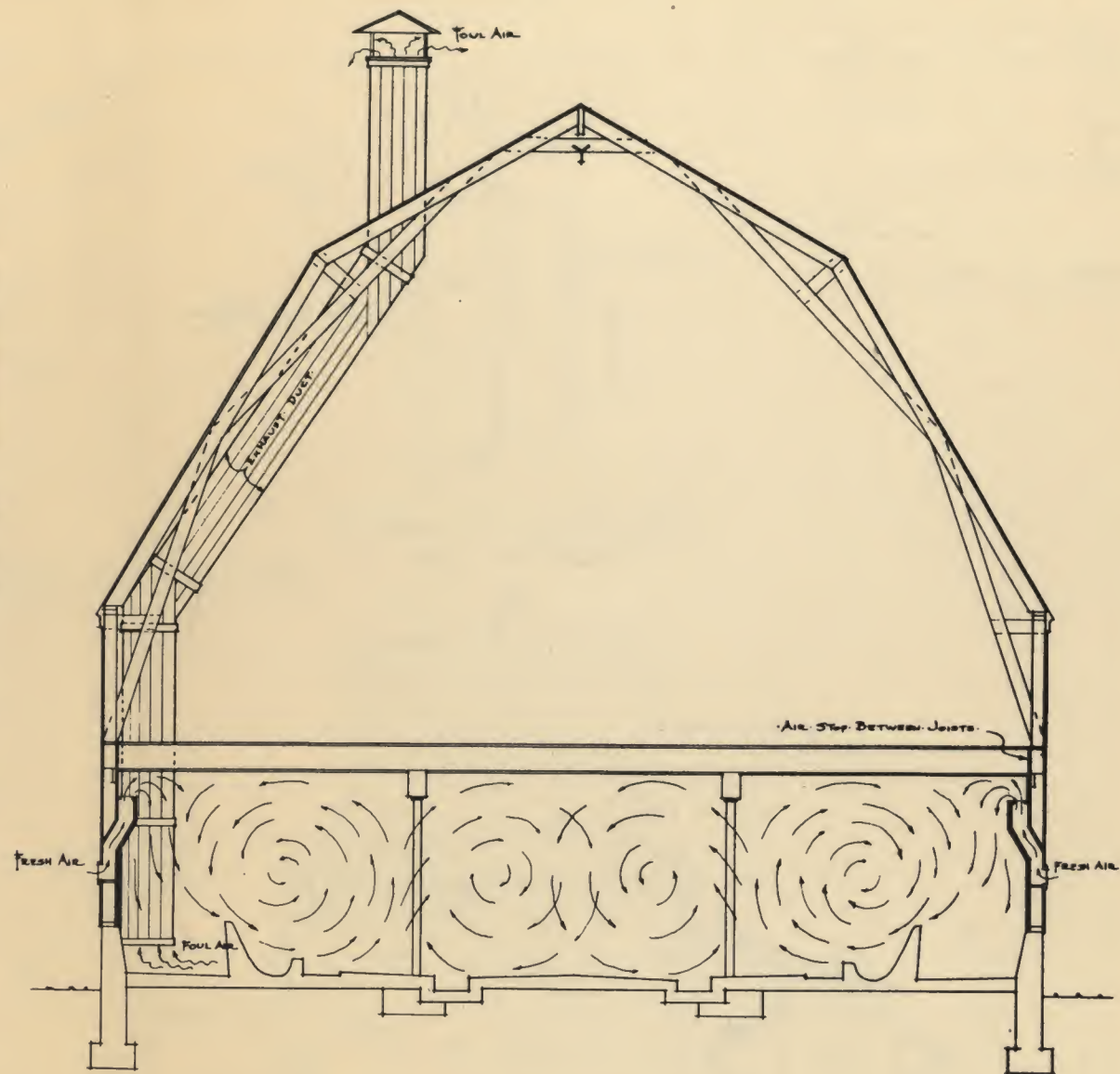
CO-OPERATIVE EXTENSION WORK AGRICULTURE & HOME ECONOMICS		
STATE OF MASS.		
DEPT. OF AGRICULTURAL ENGINEERING MASS. STATE COLLEGE - AMHERST, MASS.		
AND U. S. D. A. CO-OPERATING		
VENTILATING DETAILS EXHAUST DUCTS		
MASS. 34	PLAN 523.C	SHEET 5 OF 7



LOCATIONS FOR EXHAUST DUCTS.
FIGURE NO. 15.

NOT DRAWN TO SCALE.

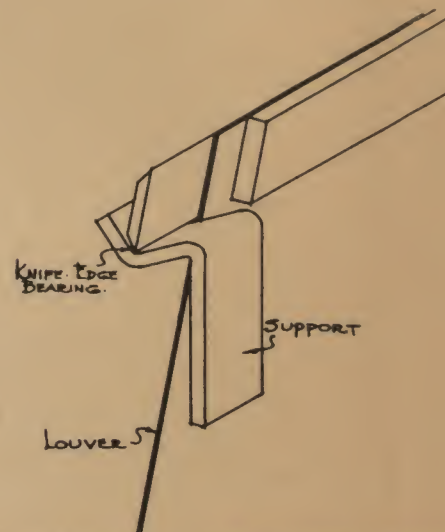
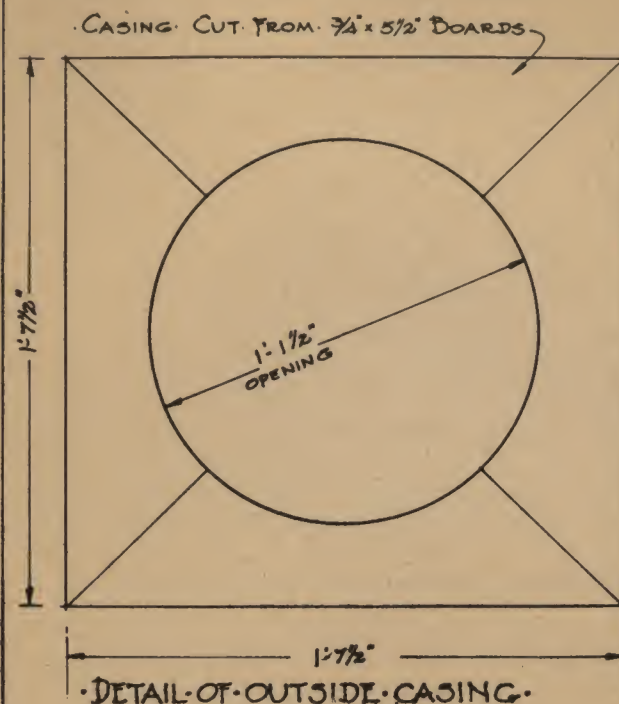
ADAPTED FROM DESIGNS OF PROFESSORS FAIRBANKS & GOODMAN OF CORNELL UNIVERSITY.



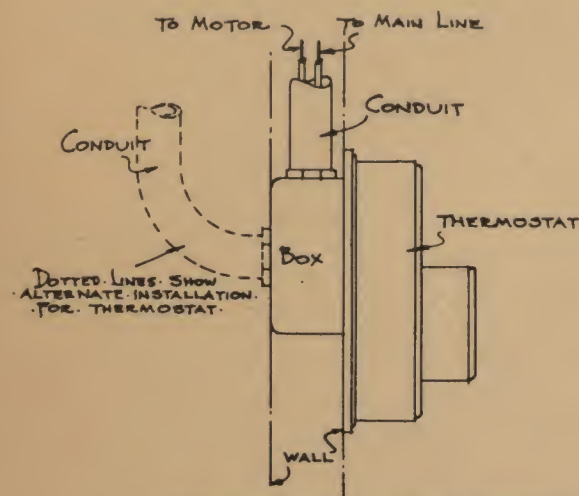
CROSS SECTION THRU BARN.
INDICATING DIRECTION OF FLOW OF AIR CURRENTS.

FIGURE NO. 16.

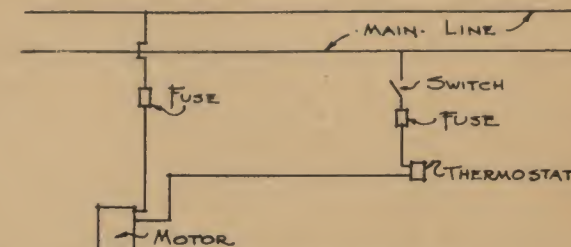
CO-OPERATIVE EXTENSION WORK		
AGRICULTURE & HOME ECONOMICS		
STATE OF MASS.		
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MASS. STATE COLLEGE - AMHERST - MASS.		
AND		
U. S. D. A. CO-OPERATING		
VENTILATING DETAILS		
DUCT LOCATIONS		
MASS. 34	PLAN 523	SHEET 6 OF 7



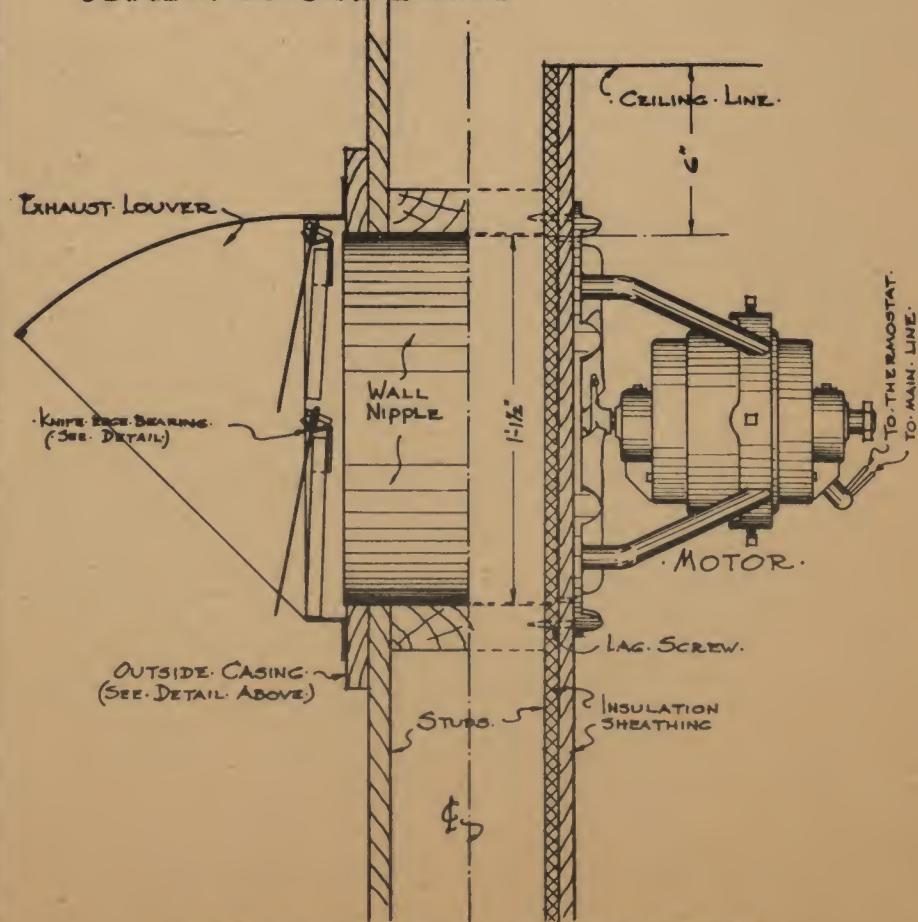
DETAIL OF KNIFE EDGE BEARING
NOT DRAWN TO SCALE



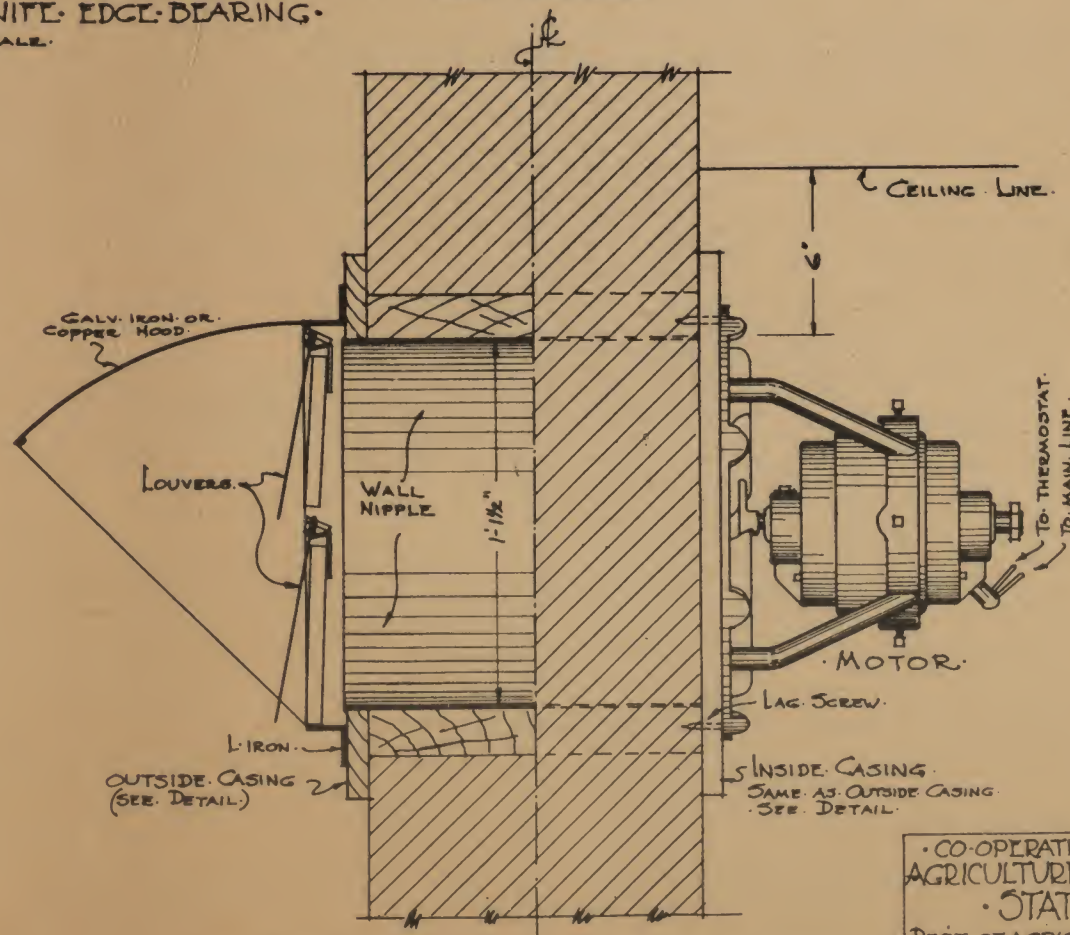
DETAIL OF THERMOSTAT
HALF FULL SIZE



WIRING DIAGRAM
NOT DRAWN TO SCALE



HALF SECTION HALF ELEVATION
DETAIL IN FRAME WALL



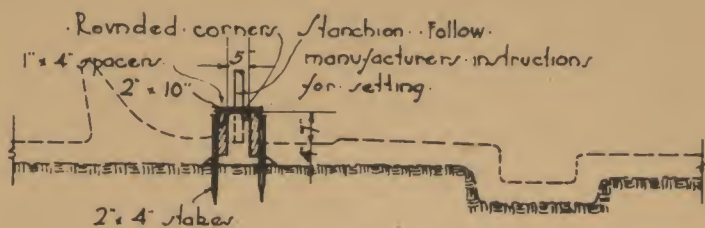
HALF SECTION HALF ELEVATION

DETAIL IN MASONRY WALLS

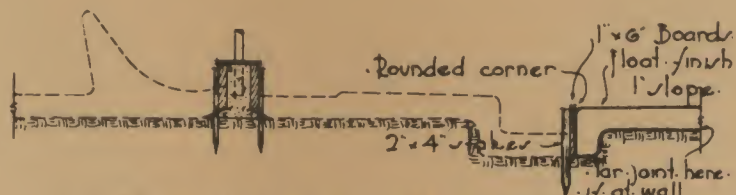
DETAILS OF EXHAUST FAN
SCALE 3 INCHES = 1 FOOT

THESE DETAILS FURNISHED THROUGH THE COURTESY OF O.D. STICHTER OF THE LOUDEN MACHINERY CO. ALBANY, N.Y.

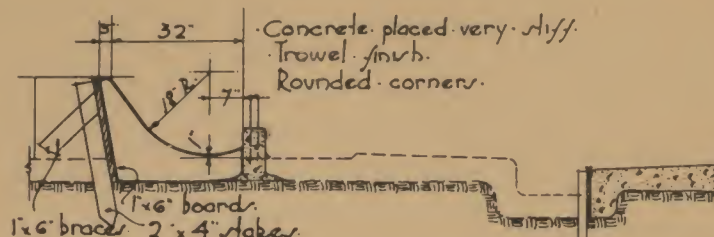
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U.S.D.A. CO-OPERATING
VENTILATING DETAILS - EXHAUST FANS
MASS. 34 PLAN 523-C SHEET 7 OF 7



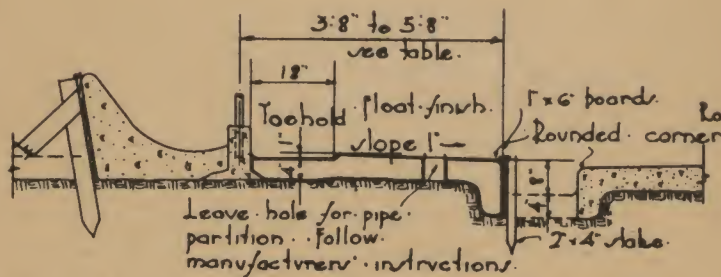
1ST • BUILD • MANGER • CURB •



2ND • WHILE CURB HARDENS • BUILD • LITTER • ALLEY •



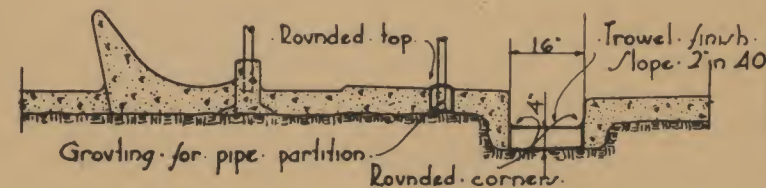
3RD • REMOVE CURB FORMS AND BUILD MANGER •



4TH • BUILD • STANDING • PLATFORM •
• WHILE MANGER • HARDENS •

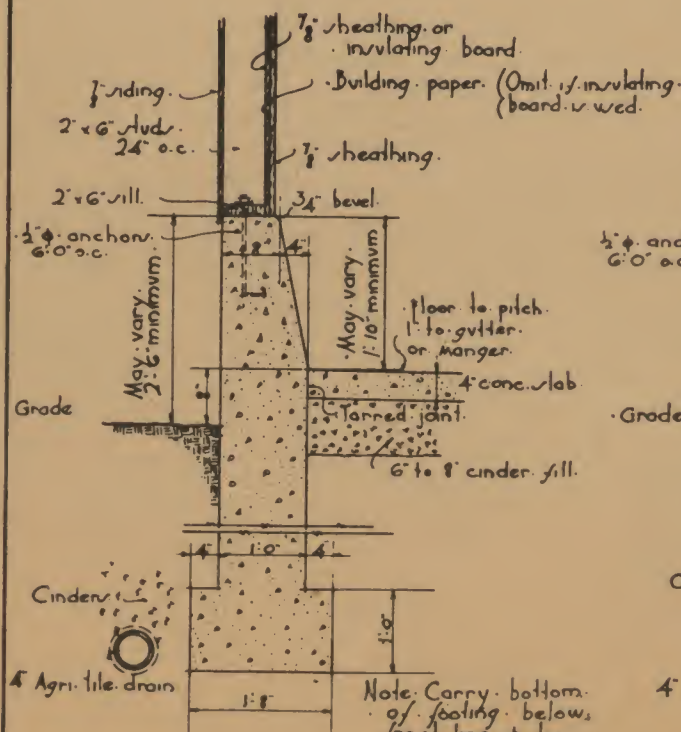


5TH • REMOVE MANGER FORMS •
• AND BUILD FEED ALLEY •

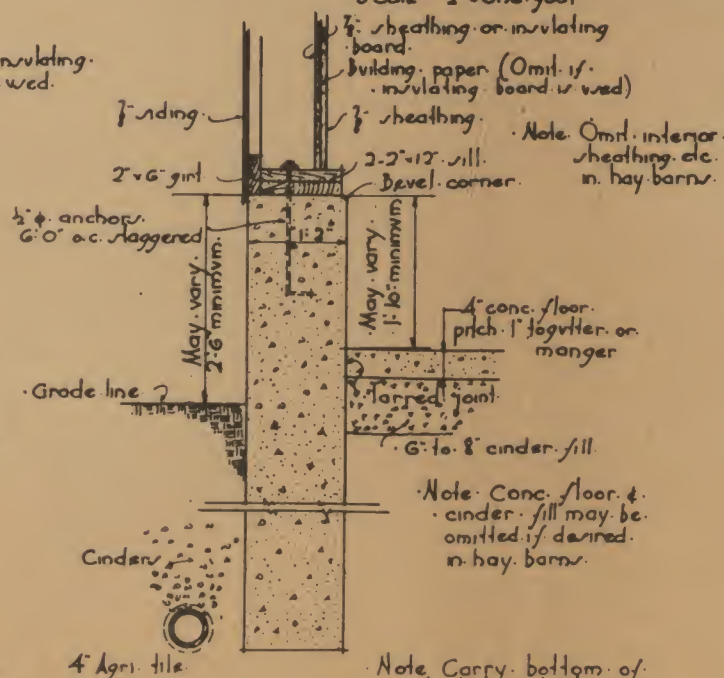


6TH • GROVT • IN • PIPE • PARTITION •
• AND FINISH JOB BY PLACING •
• GUTTER •

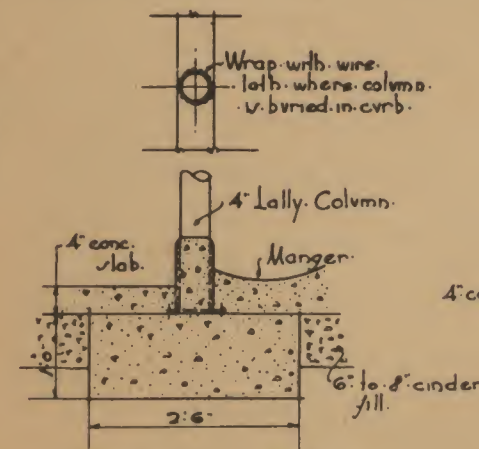
• OPERATIONS • IN • PLACING • CONCRETE •
• FLOOR • STRUCTURE • IN • DAIRY • BARN •



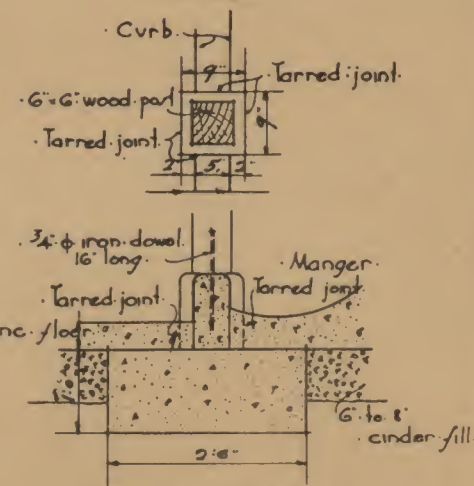
• TYPICAL • DETAIL •
• FOUNDATION • WALL •
• BRICK • RAFTER • CONSTRUCTION •
Scale 3/4\" = 1' 0"



• TYPICAL • DETAIL •
• FOUNDATION • WALL •
• SHAWVER TRUSS CONSTRUCTION •
Scale 3/4\" = 1' 0"

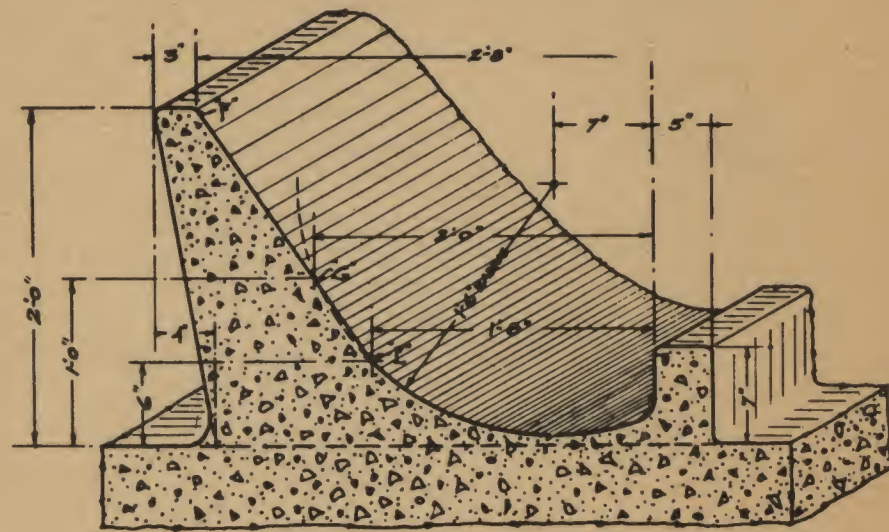


• TYPICAL • DETAIL •
• INTERIOR • FOOTINGS •
• FOR LALLY COLUMNS •
Scale 3/4\" = 1' 0"

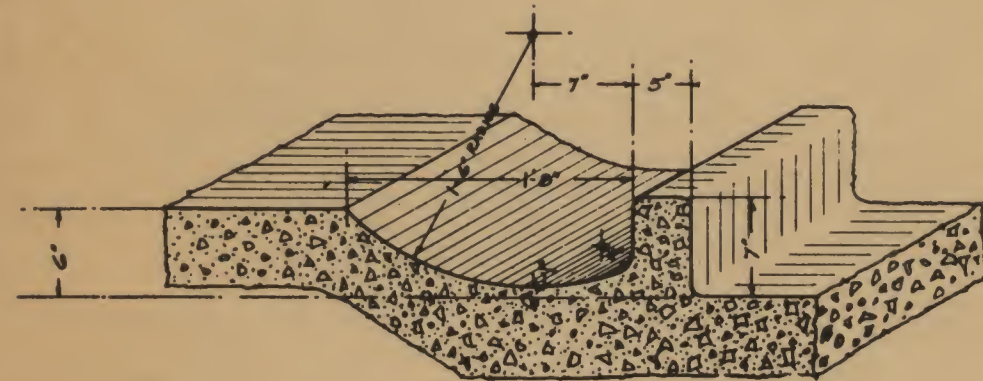


• TYPICAL • DETAIL •
• INTERIOR • FOOTINGS •
• FOR WOOD POSTS •
Scale 3/4\" = 1' 0"

• CO-OPERATIVE • EXTENSION • WORK •
AGRICULTURE & HOME ECONOMICS •
• STATE • OF • MASS •
DEPT. OF AGRICULTURAL ENGINEERING •
MASS • STATE • COLLEGE • AMHERST • MASS •
V • S • D • A • CO-OPERATING •
MISCELLANEOUS • CONCRETE •
DETAILS • IN • DAIRY • BARN •
MASS • 34 • PLAN • 516C • SHEET • OF •
OLD PLAN NO. 565 - C



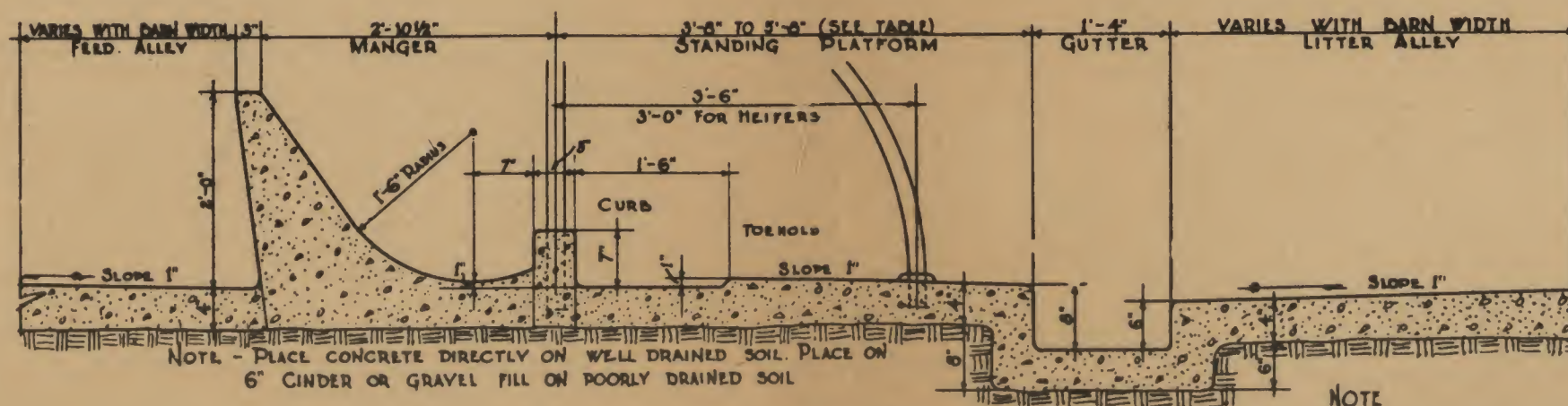
• TYPE A •
• RAISED MANGER •



• TYPE B •
• RAISED FEED ALLEY •

• RECOMMENDED MANGER DETAILS •

• SCALE: 1 1/2" = 1' •



• SECTION THRU MANGER, STANDING PLATFORM, GUTTER, & LITTER, & FEED ALLEYS •

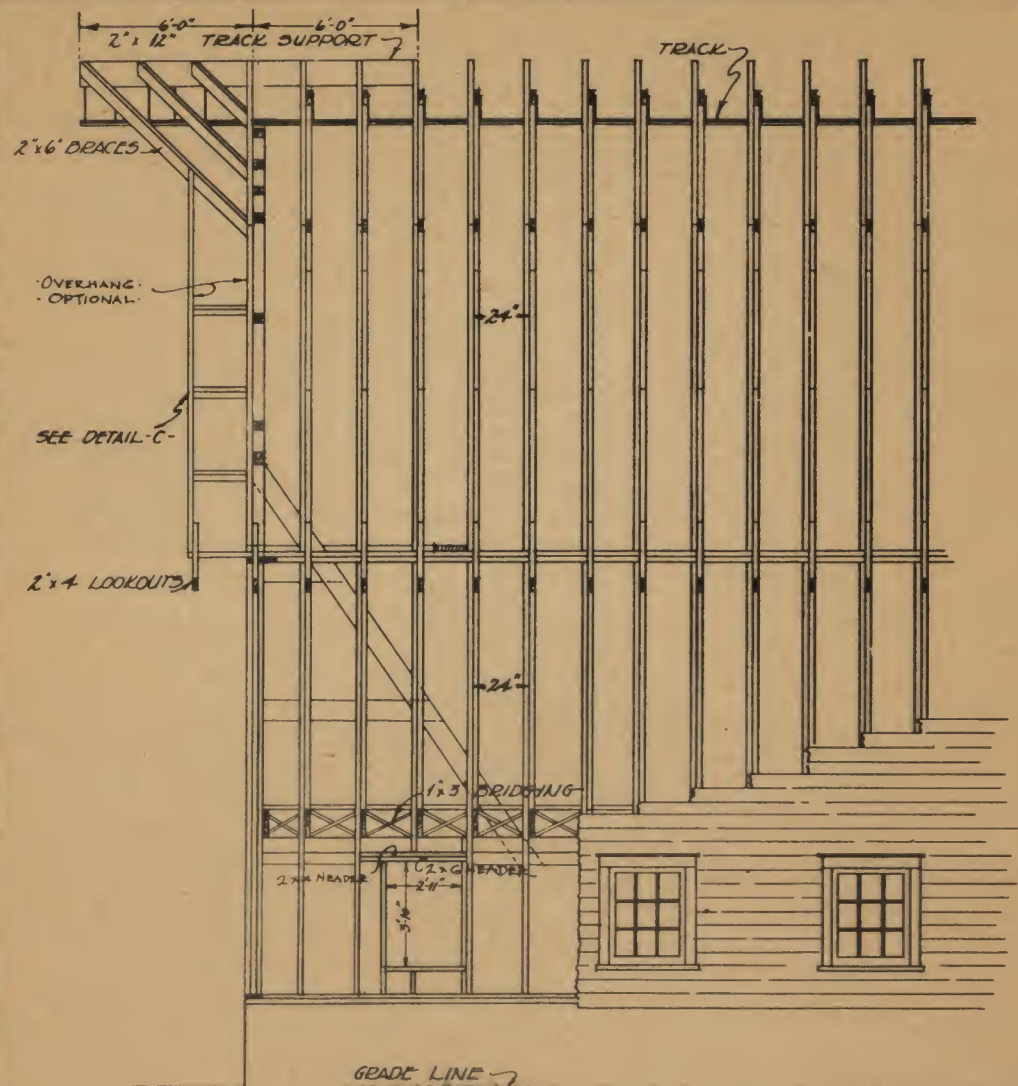
NOTE

ALL SURFACES FLOAT FINISHED
EXCEPT MANGER, FEED ALLEY,
& GUTTER, WHICH ARE TROWEL
FINISHED, ALL CORNERS ROUNDED.

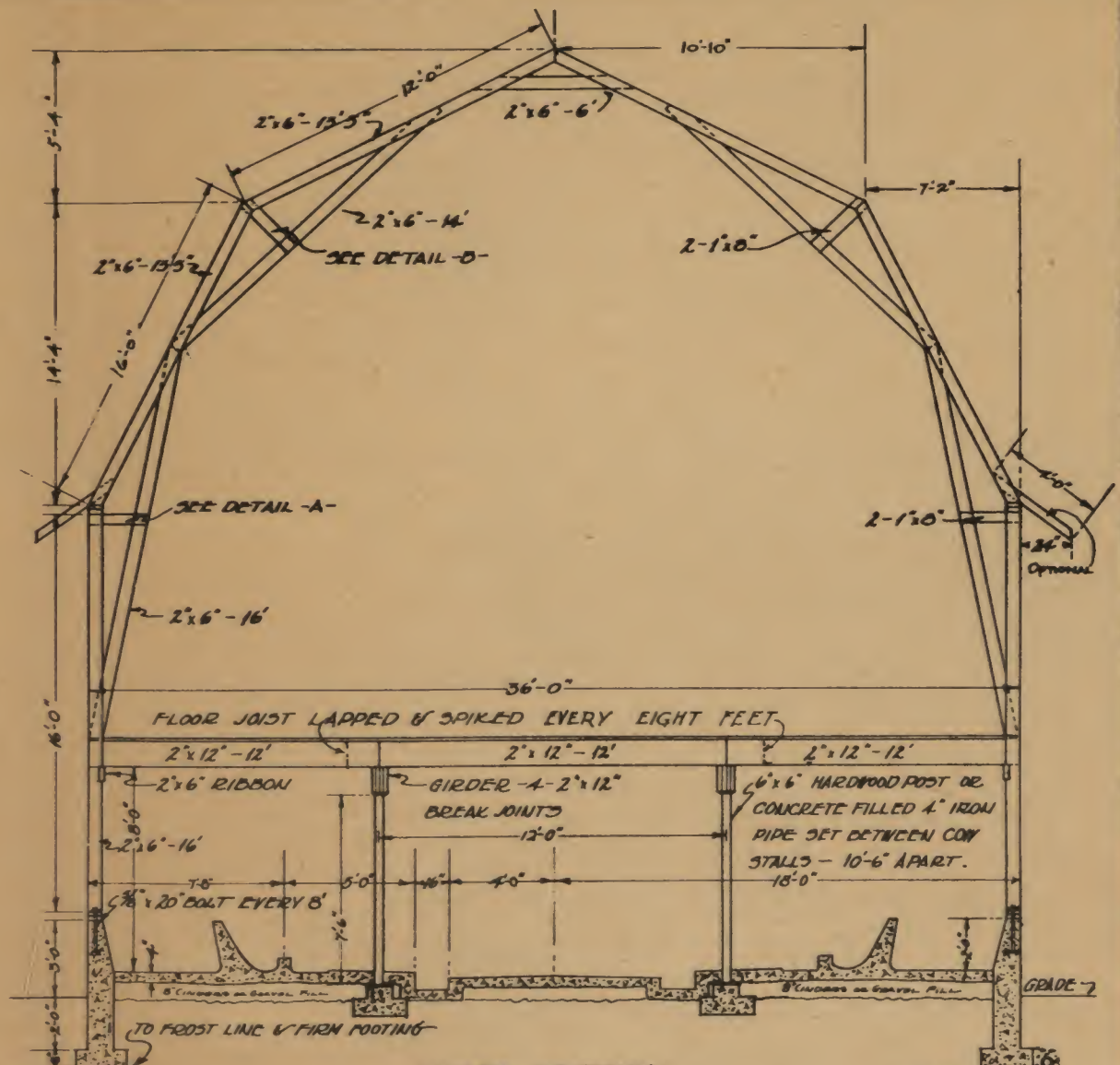
STANDARD STALL DIMENSIONS (FOR VARIOUS BREEDS OF CATTLE)				
BREEDS	WIDTH	LENGTH OF PLATFORM		
		SMALL	MEDIUM	LARGE
HOLSTEIN	3'-6" TO 4'-0"	4'-10"	5'-2"	5'-8"
SHORTHORN	3'-6" • 4'-0"	4'-8"	5'-0"	5'-6"
AYRSHIRE	3'-6" • 3'-8"	4'-6"	5'-0"	5'-6"
GUERNSEY	3'-4" • 3'-6"	4'-6"	4'-10"	5'-4"
JERSEY	3'-4" • 3'-6"	4'-4"	4'-8"	5'-0"
HEIFERS	2'-9" • 3'-2"	3'-6"	3'-10"	4'-2"

• CO-OPERATIVE EXTENSION WORK •
• AGRICULTURE & HOME ECONOMICS •
• STATE OF MASS. •
DEPT. OF AGRICULTURAL ENGINEERING
MASS. STATE COLLEGE - AMHERST, MASS.
AND
U.S.D.A. CO-OPERATING.
• MANGER DETAILS •

MASS. 34 • PLAN 538C • SHEET 1 OF 1

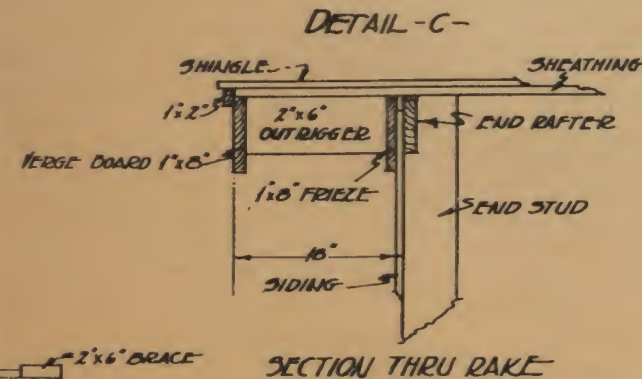
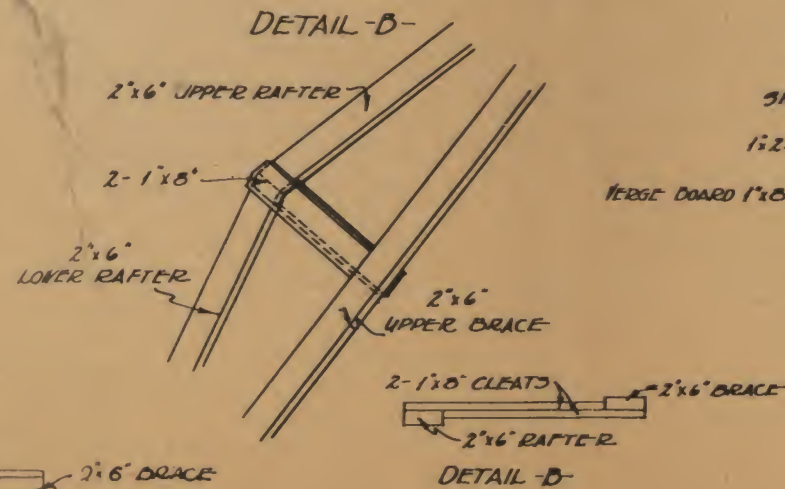
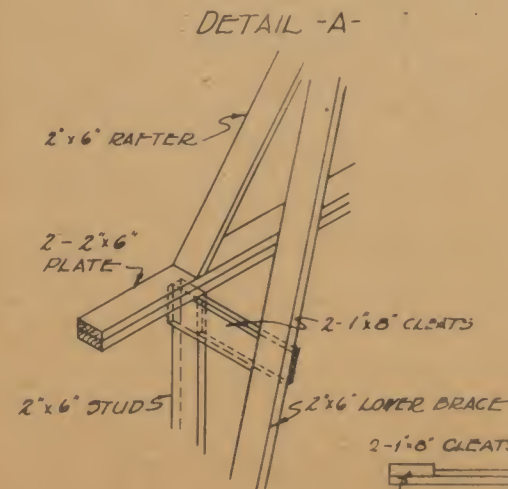


PART OF SIDE FRAMING



CROSS SECTION

SCALE - 1/4" = 1'-0"

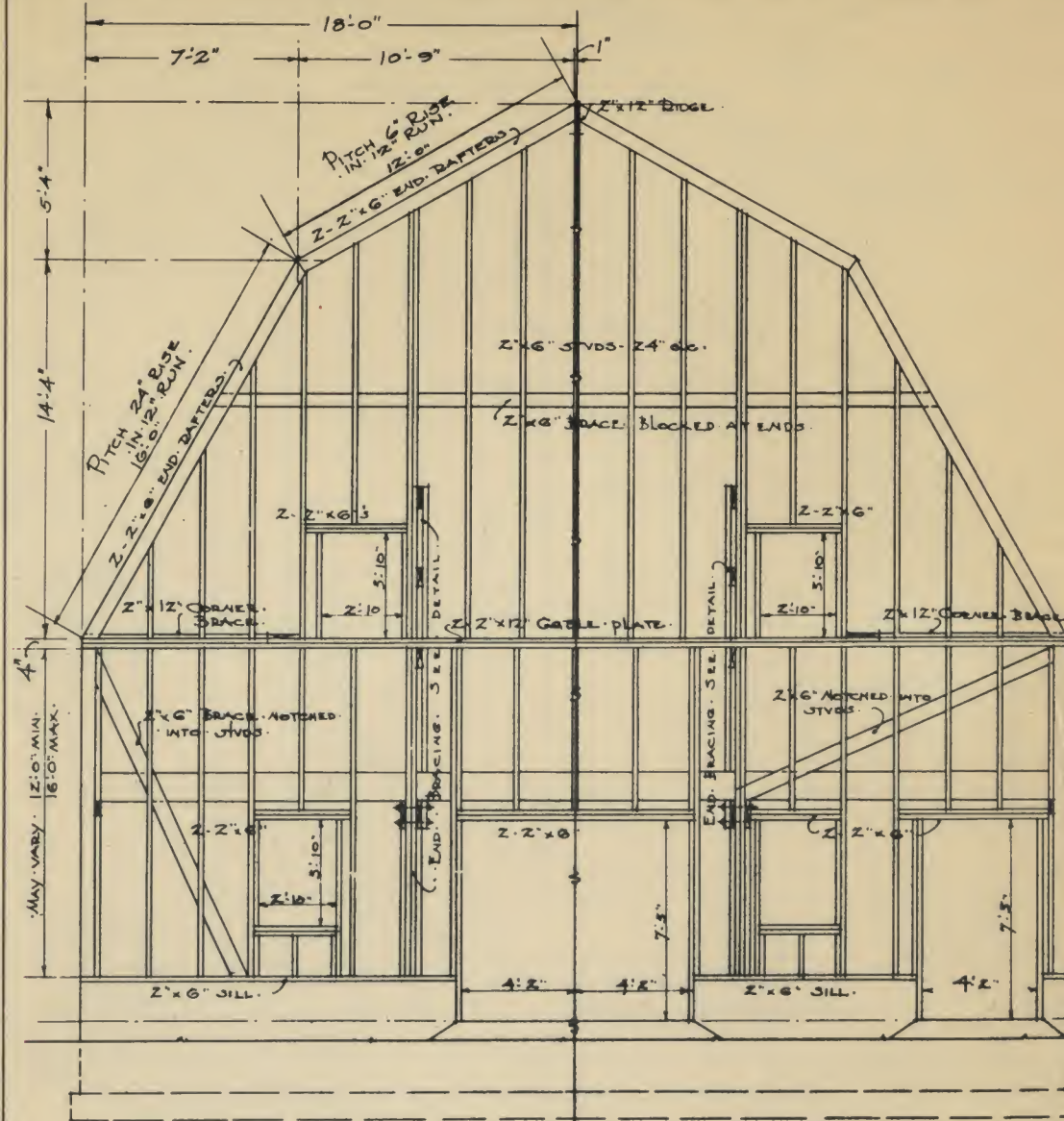


SECTION THRU RAKE

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MASSACHUSETTS
MASSACHUSETTS STATE COLLEGE
AND
U.S. DEPT. OF AGRICULTURE COOPERATING
EXTENSION AGRICULTURAL ENGINEER APPEARS, MASS

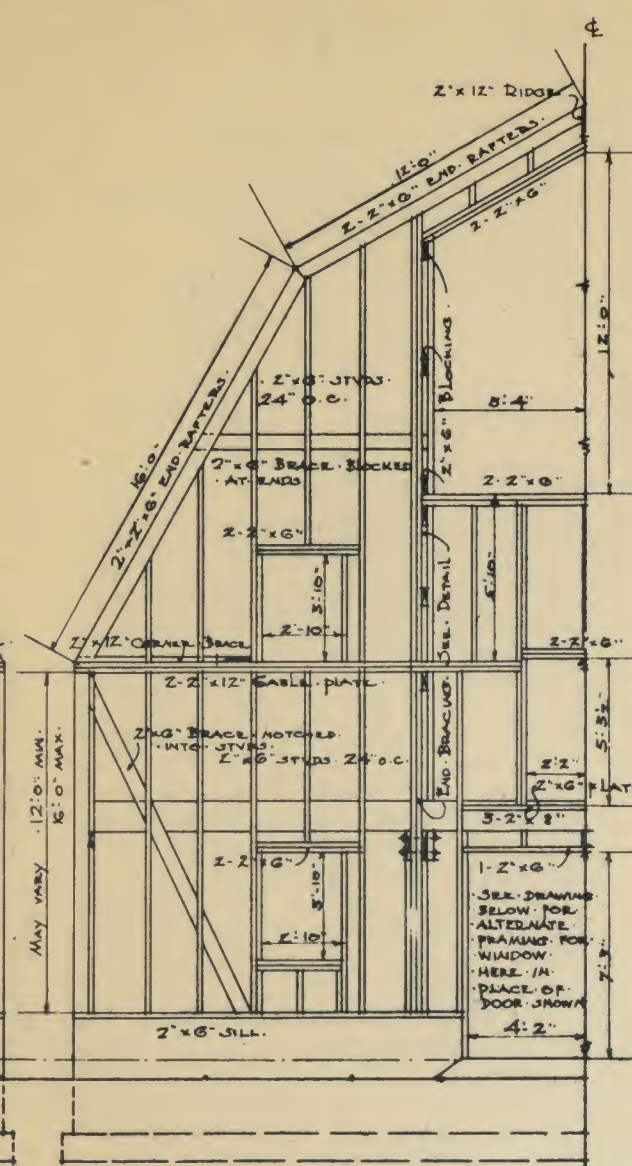
SHEET 1 OF SHEETS

EXCHANGE PLAN 537-C

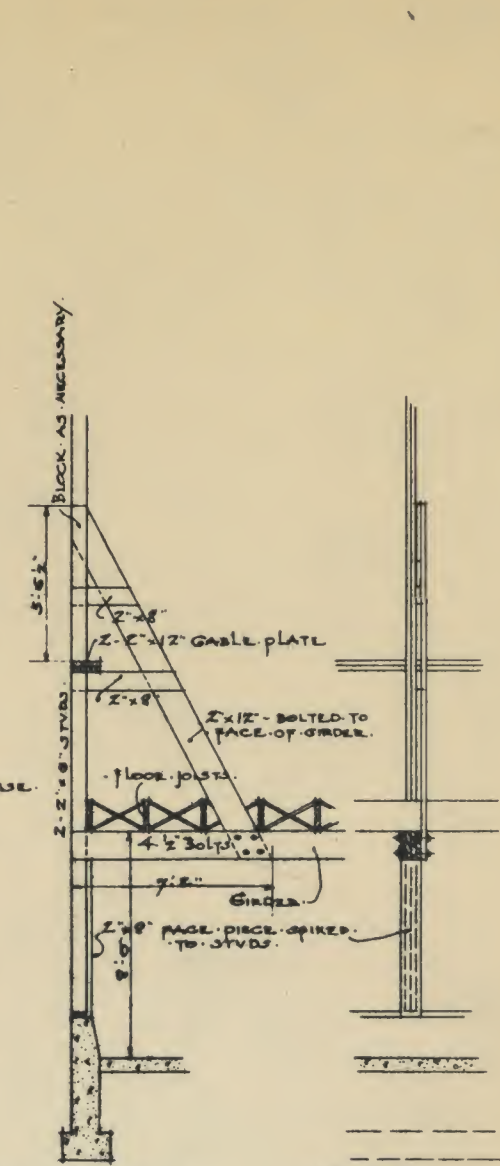


• ONE-HALF ELEVATION •
• COWS FACING OVT •
• SCALE 1/4" = 1'-0"

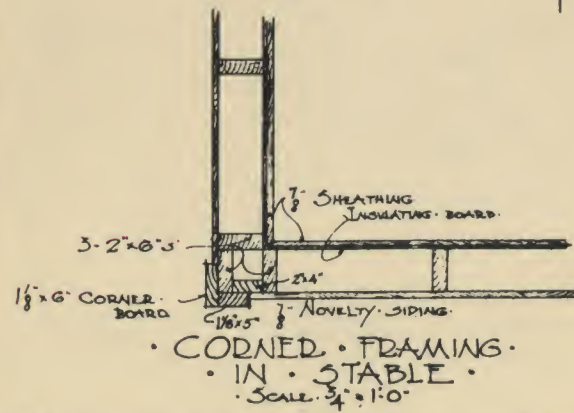
• ONE-HALF ELEVATION •
• COWS FACING IN •
• SCALE 1/4" = 1'-0"



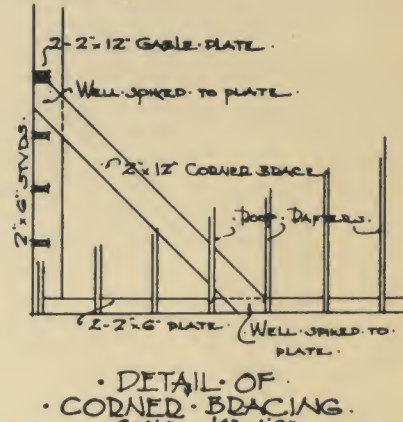
• ONE-HALF ELEVATION •
• WHERE HAY DOORS OCCUR •
• SCALE 1/4" = 1'-0"



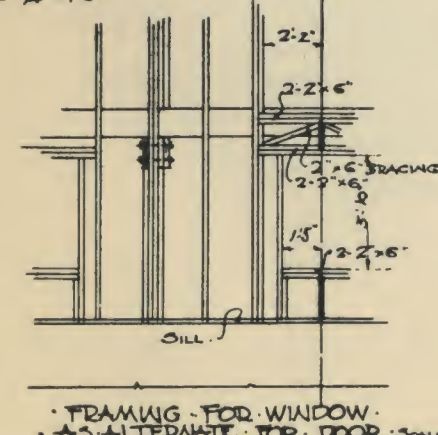
• SIDE ELEVATION •
• INTERIOR ELEVATION •
• DETAILS OF END BRACING •
• SCALE 1/4" = 1'-0"



• CORNER FRAMING •
• IN STABLE •
• SCALE 3/4" = 1'-0"



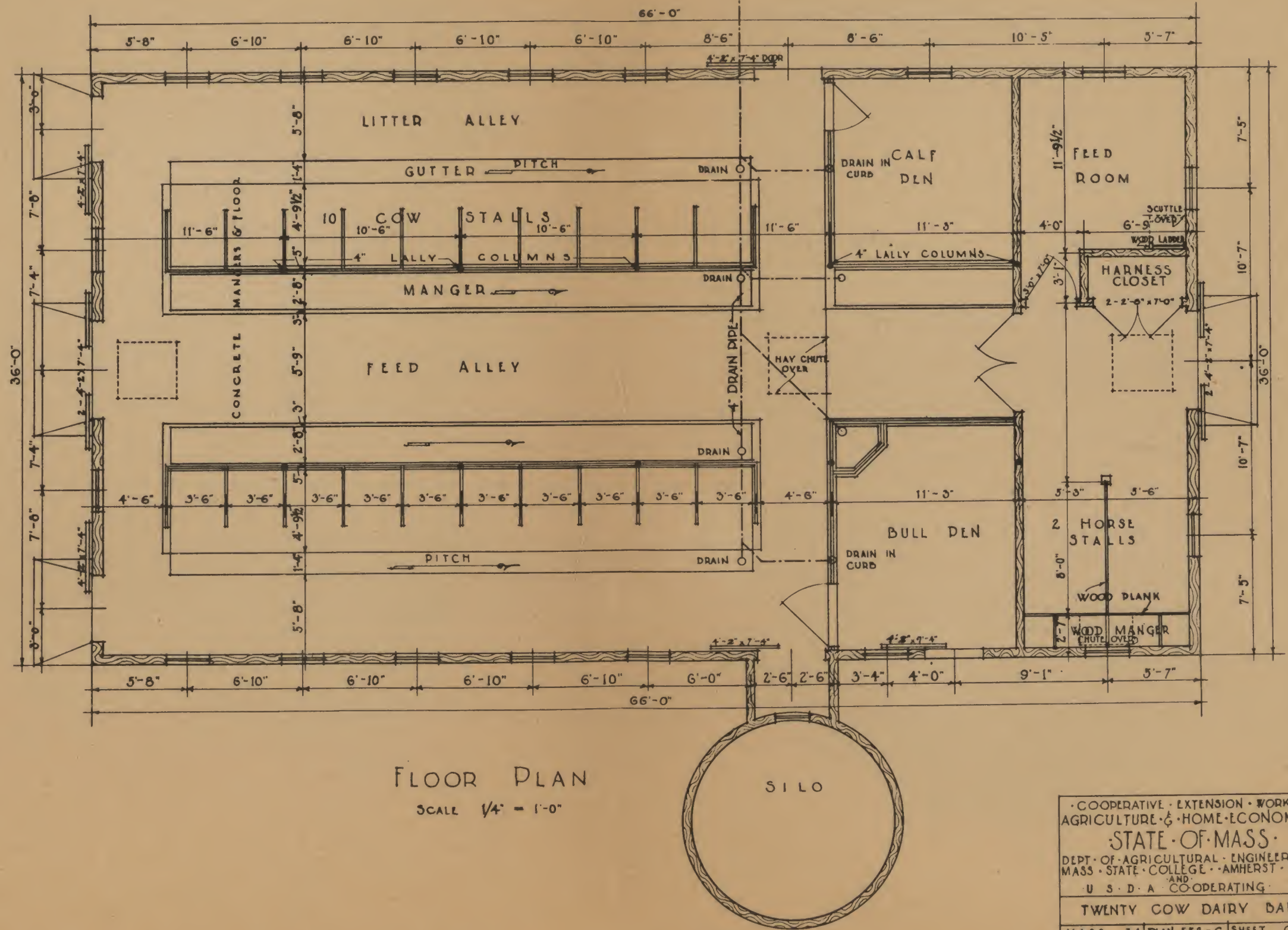
• DETAIL OF •
• CORNER BRACING •
• SCALE 1/4" = 1'-0"



• FRAMING FOR WINDOW •
• AS ALTERNATE FOR DOOR • SCALE 1/4" = 1'-0"

NOTE: SEE PLAN FOR EXACT LOCATION OF ALL OPENINGS.

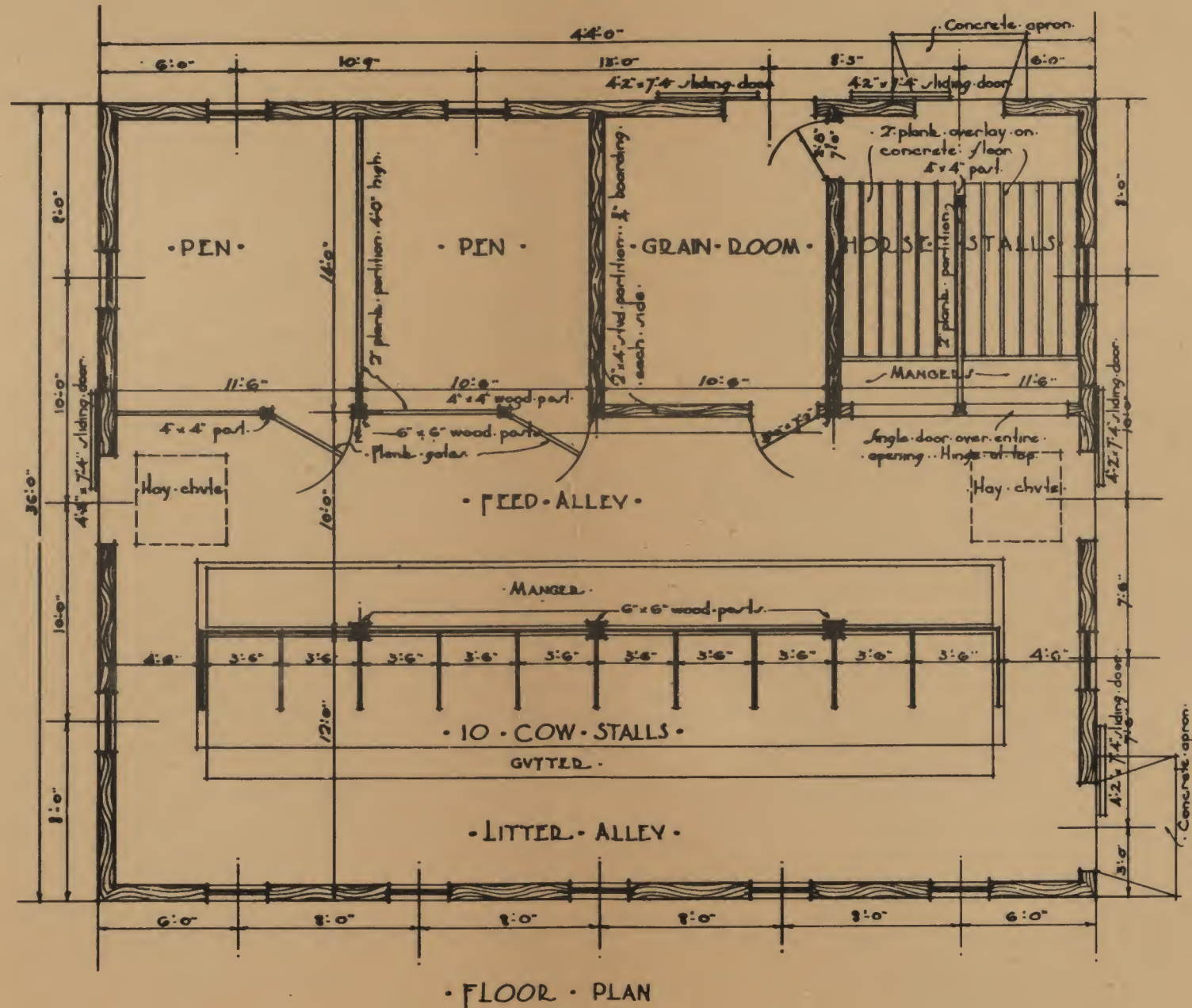
• CO-OPERATIVE EXTENSION WORK •
• AGRICULTURE & HOME ECONOMICS •
• STATE OF MASS. •
• DEPT. OF AGRICULTURAL ENGINEERING •
• MASS. STATE COLLEGE - AMHERST, MASS. •
• V. S. D. A. CO-OPERATING •
• END FRAMING DETAILS •
• TWO STORY DAIRY BARN •
• MASS. 34 PLAN 536C SHEET OF



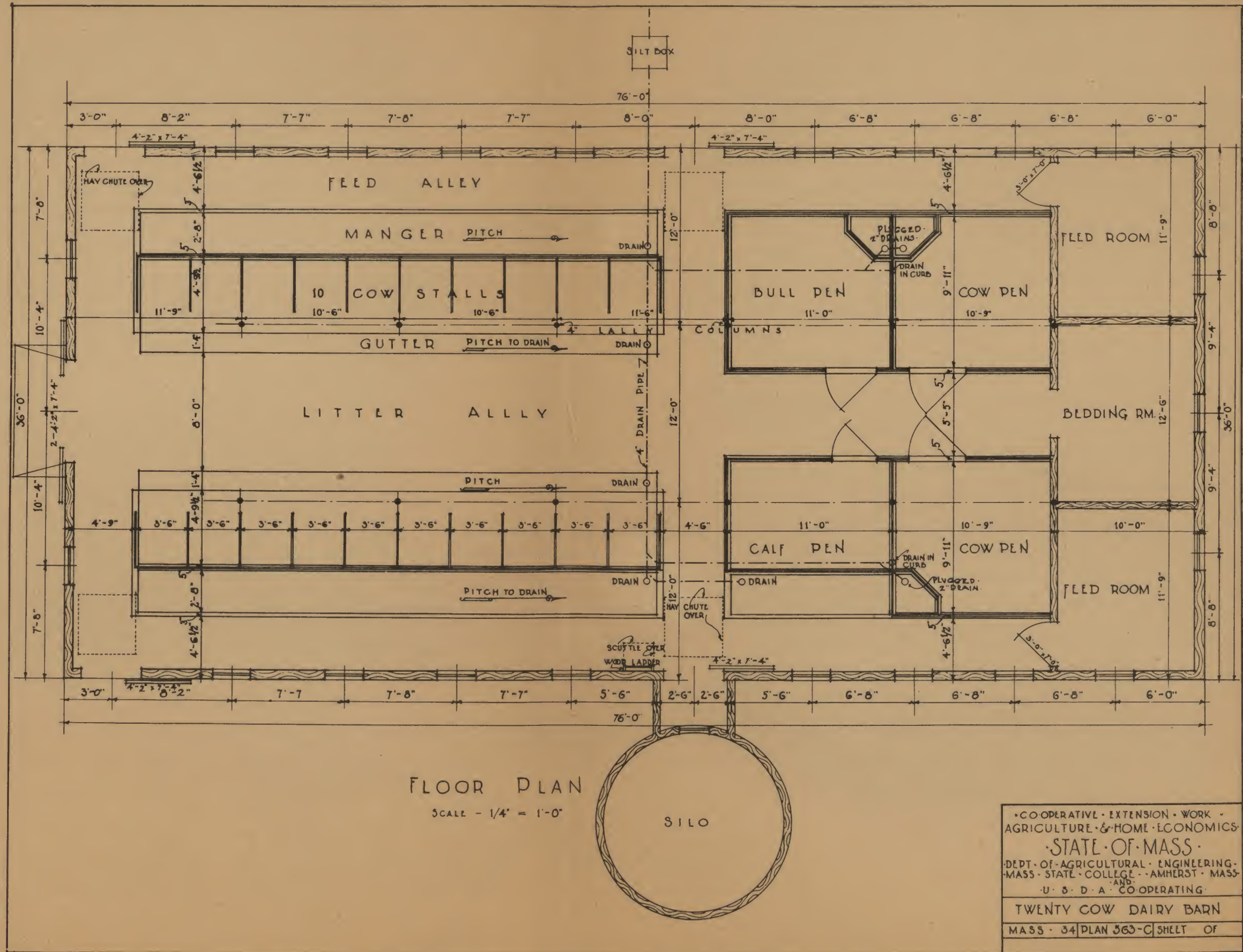
FLOOR PLAN

SCALE 1/4" = 1'-0"

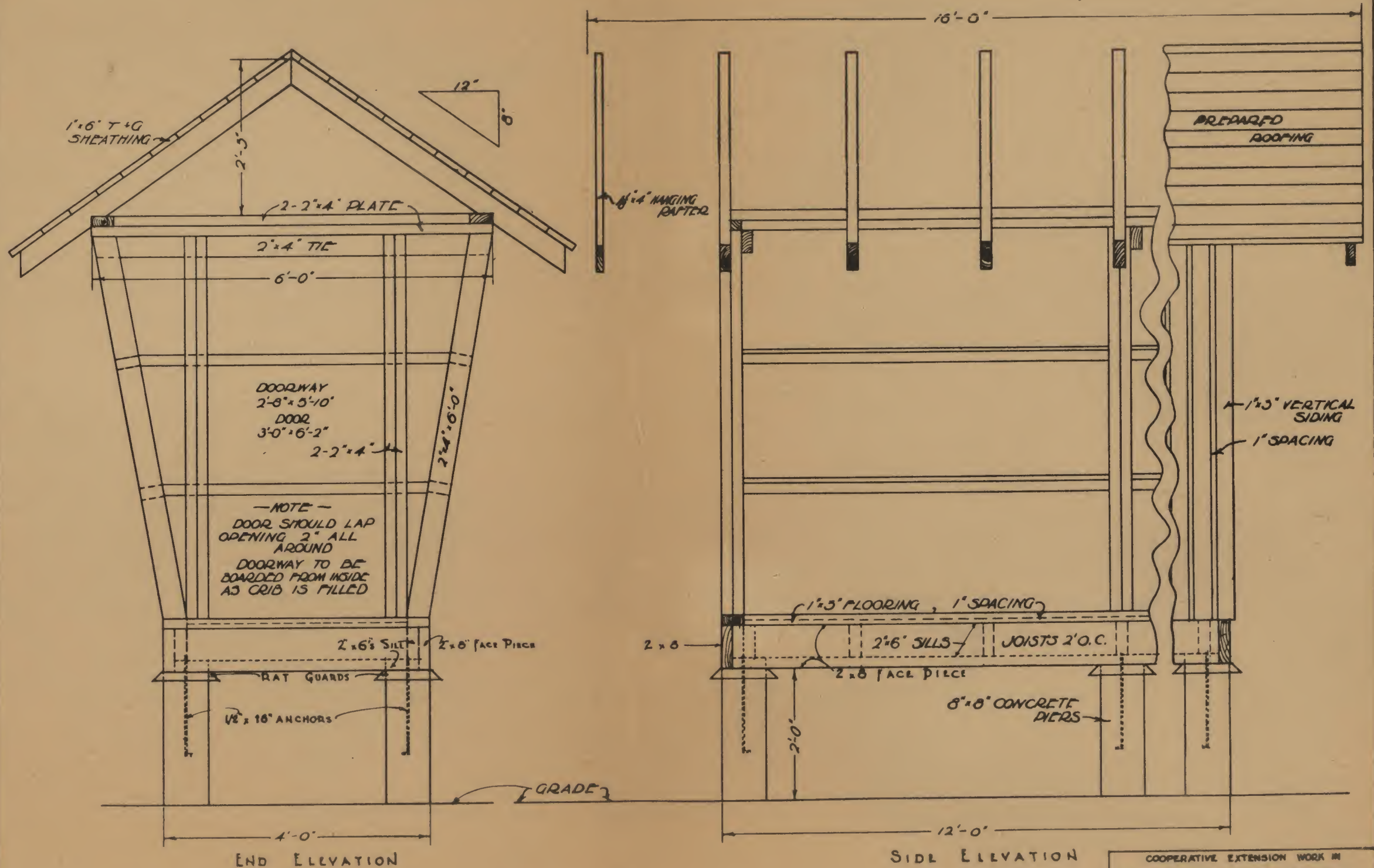
• COOPERATIVE • EXTENSION • WORK •
 AGRICULTURE • & • HOME • ECONOMICS
 STATE • OF • MASS •
 DEPT. OF AGRICULTURAL • ENGINEERING •
 MASS • STATE • COLLEGE • AMHERST • MASS •
 U S D A • COOPERATING •
 TWENTY COW DAIRY BARN
 MASS - 34 PLAN 552-C SHEET OF



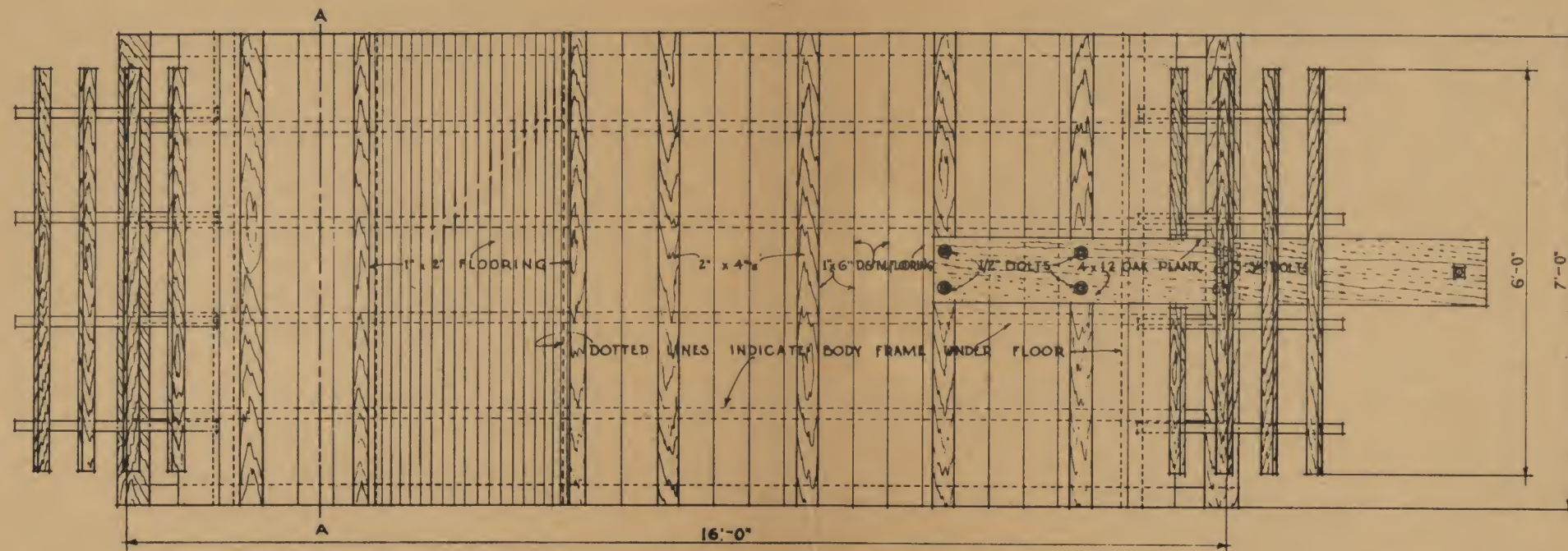
563C - DAIRY BARN, 20-COW, 36', FACE OUT



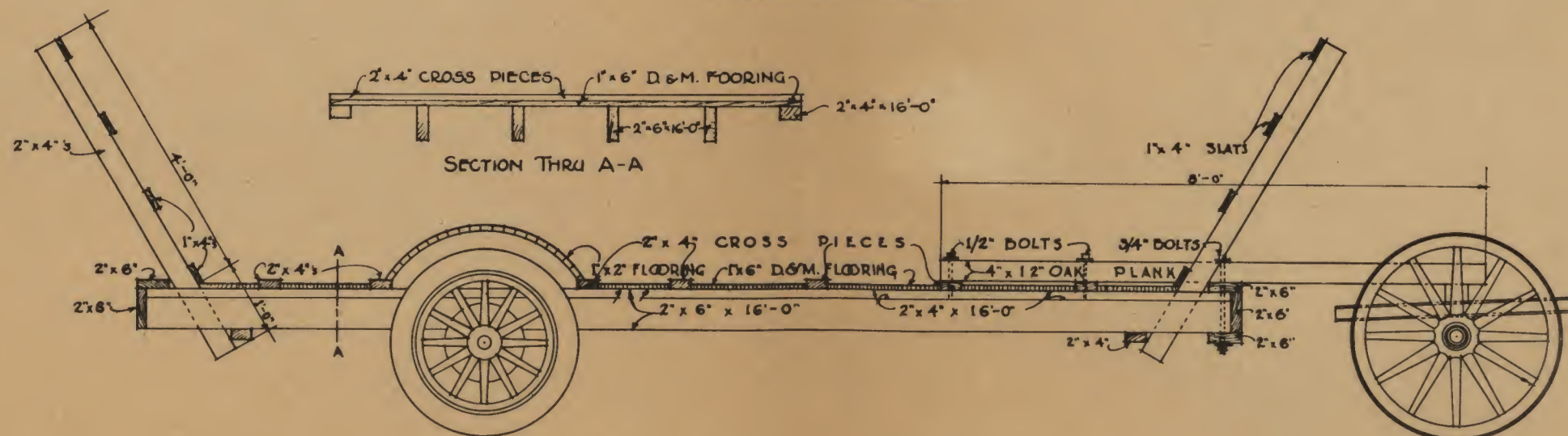
• COOPERATIVE • EXTENSION • WORK •
 AGRICULTURE • & HOME • ECONOMICS •
 • STATE • OF • MASS •
 DEPT. OF AGRICULTURAL • ENGINEERING •
 MASS • STATE • COLLEGE • • AMHERST • MASS •
 U • S • D • A • COOPERATING •
 TWENTY COW DAIRY BARN
 MASS • 34 PLAN 563-C SHEET OF



CORN CRIB
CAPACITY 300 BUSHELS

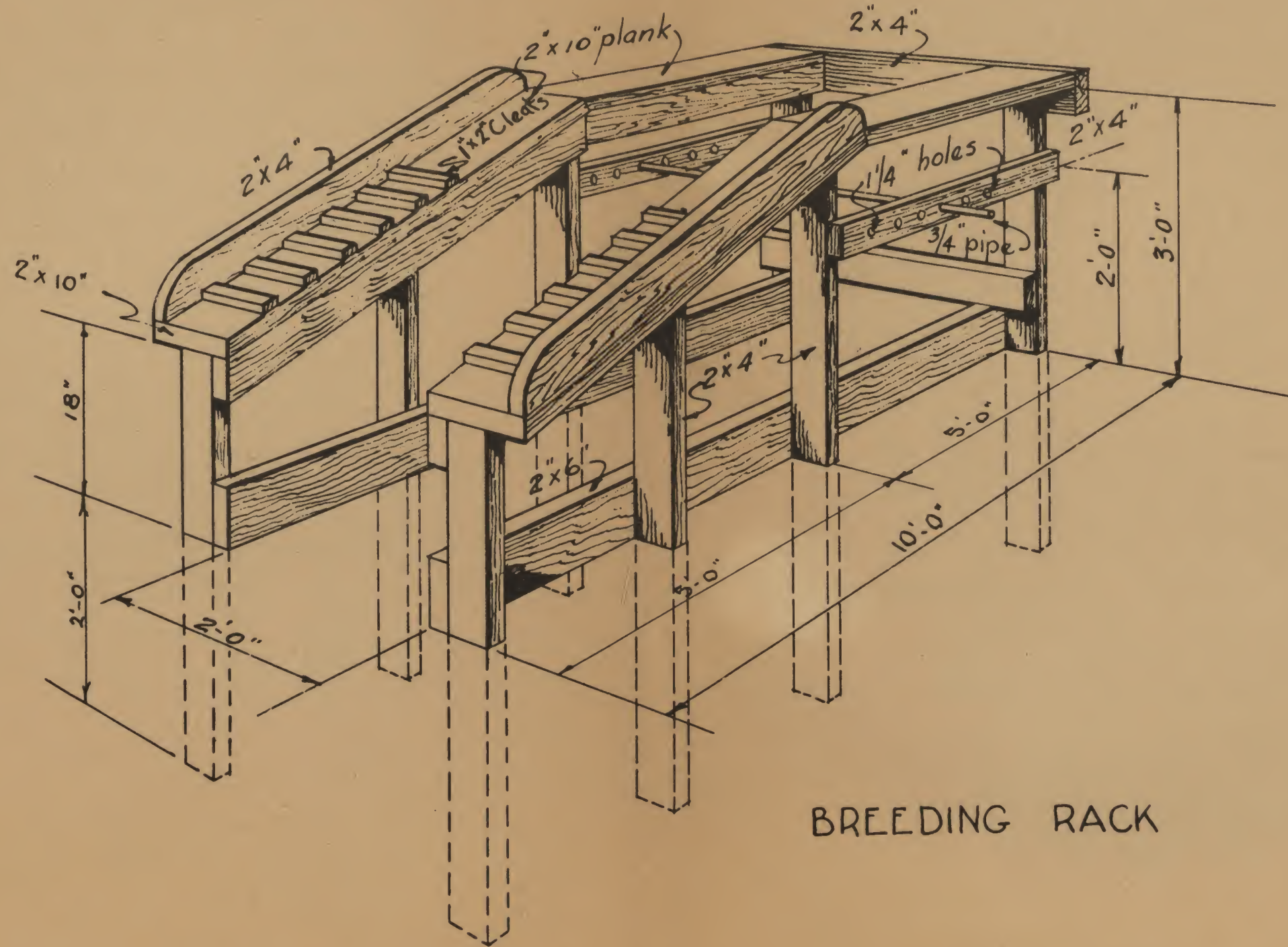


PLAN OF WAGON BODY
WHEELS NOT INDICATED

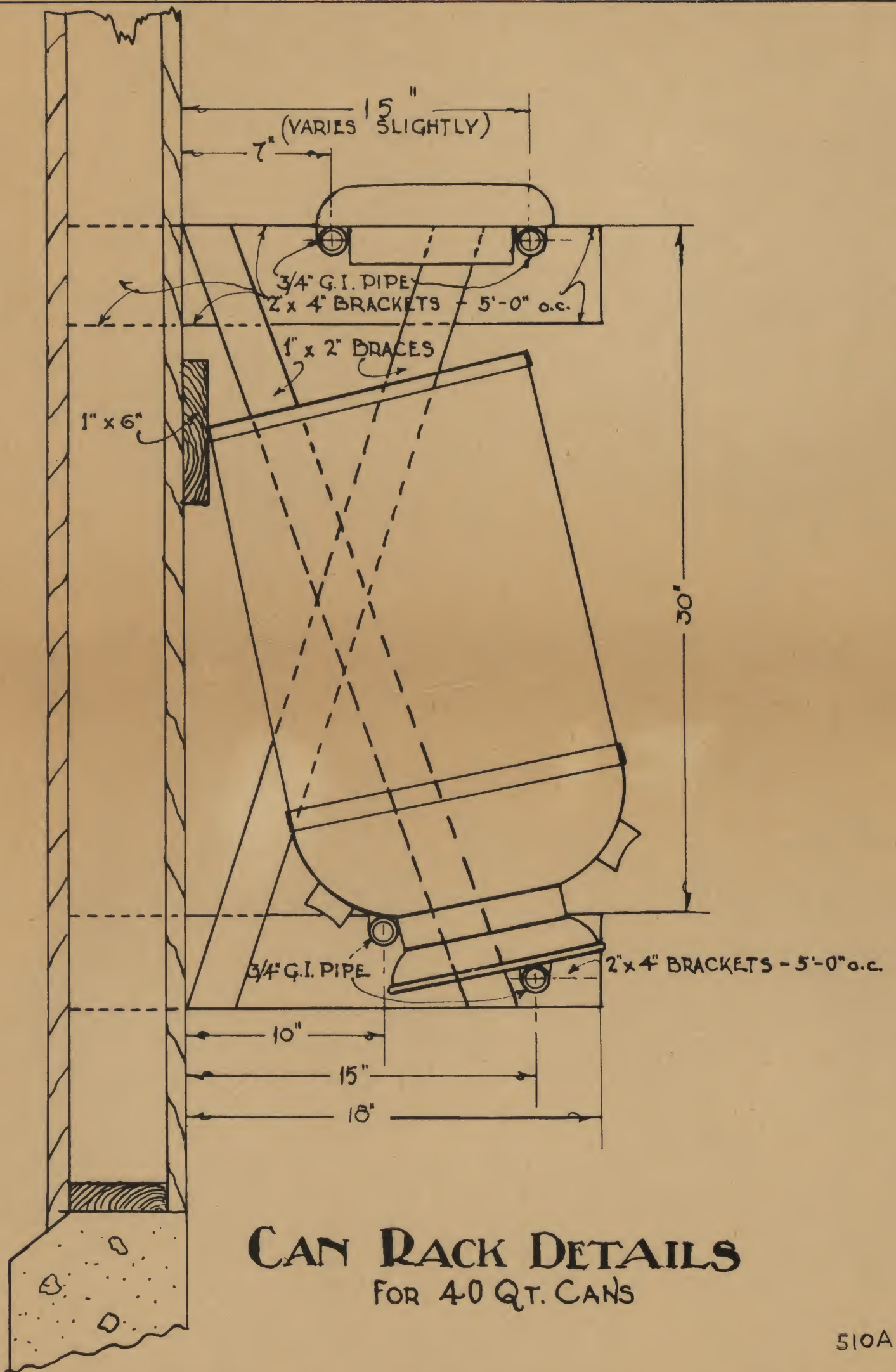


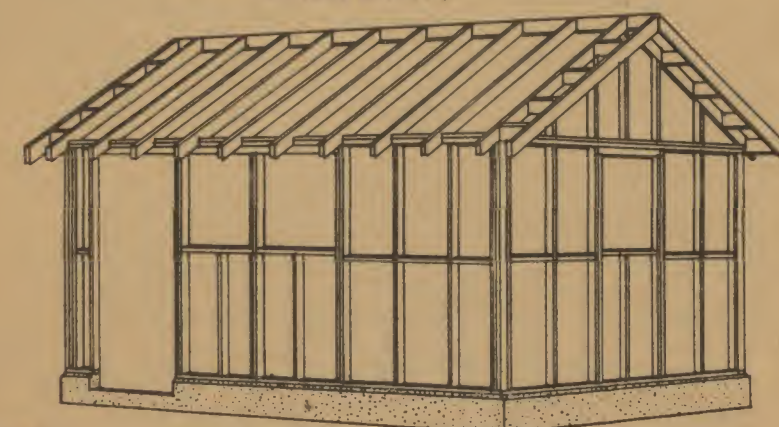
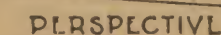
SIDE ELEVATION
SCALE 3/4" = 1'-0"

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• AGRICULTURE • G-HOME • ECONOMICS •
• STATE • OF • MASS •
• DEPT. OF AGRICULTURAL • ENGINEERING •
• MASS • STATE • COLLEGE • • AMHERST • MASS •
• U • S • D • A • CO-OPERATING •
• LOW • WAGON •
MASS • 34 PLAN 522-C SHEET 1 OF 1

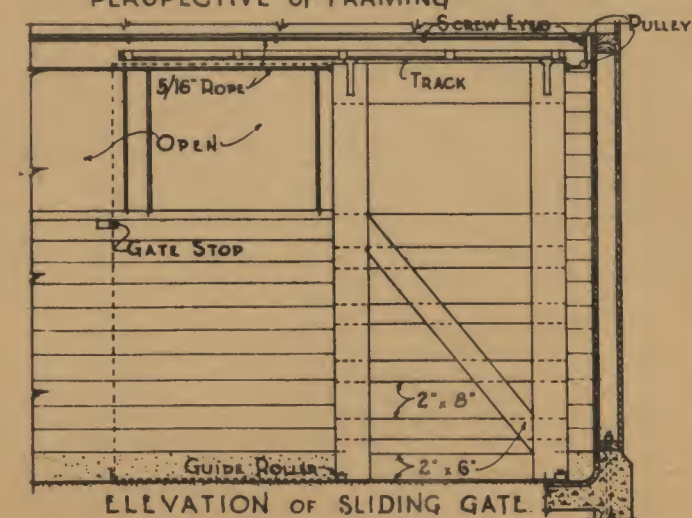


BREEDING RACK

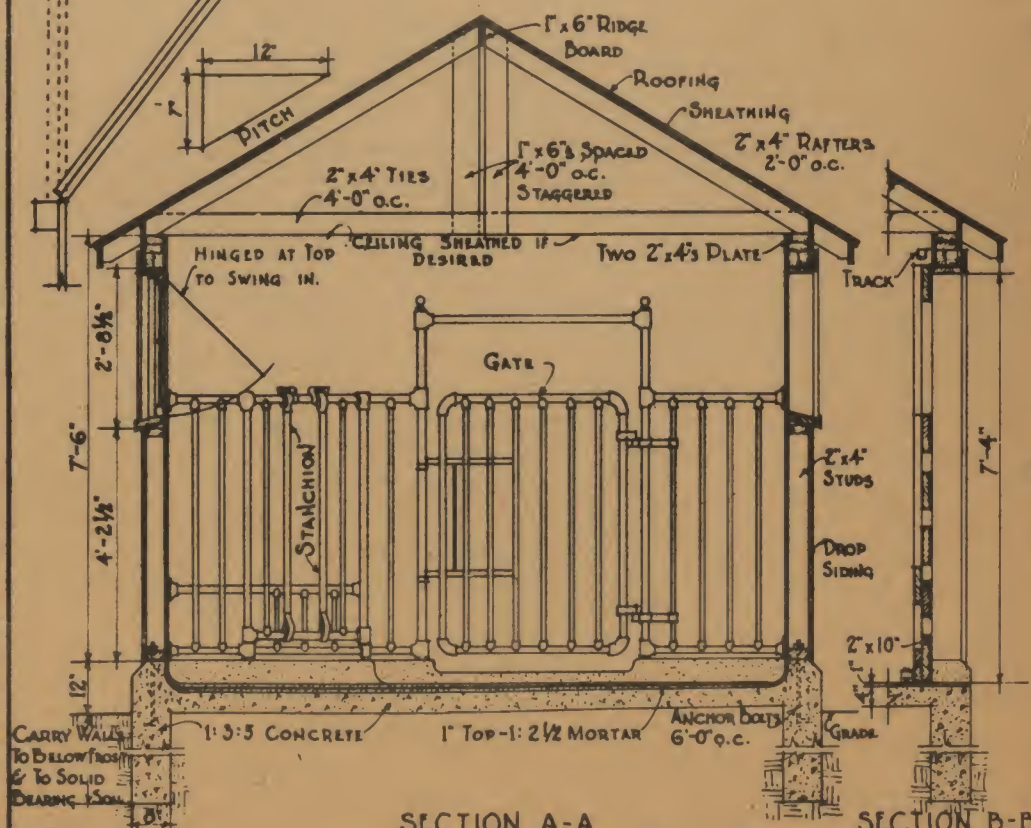




PERSPECTIVE of FRAMING



ELEVATION OF SLIDING GATE



SECTION A-A

SECTION B-B

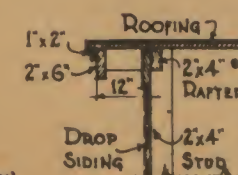
SCALE 1/2" = 1'-0"

34 SACKS CEMENT 3 1/2 CU. YDS. SAND
6 1/2 CU. YDS. GRAVEL
1" TOPPING - 73 SACKS CEMENT 53 CU. YDS. GRAVEL.
LUMBER

- | | |
|---|----------------------------|
| 6- 2"x4"x8'-0" STUDS. | 10- 2"x4"x16'-0" RAFTERS. |
| 6- 2"x4"x16'-0" PLATES. | 2- 2"x6"x16'-0" " |
| 6- 2"x4"x12'-0" " | 4- 1"x4"x10'-0" FASCIA. |
| 4- 2"x4"x12'-0" HEADERS. | 8- 1"x4"x8'-0" CORNER BOB. |
| 4- 2"x4"x12'-0" DRUINGING. | 4- 1"x2"x10'-0" " |
| 3- 2"x4"x12'-0" TIES. | 2- 1"x6"x16'-0" FRIEZE. |
| 1- 1"x6"x12'-0" HANGERS. | 1- 2"x4"x16'-0" LOOKOUTS. |
| 1- 1"x6"x20'-0" RIDGE DB. | |
| 400- FT. DM. 1"x8" SHEATHING (ROOF) | |
| 550- " " " 1"x6" DROP SIDING (OUTSIDE WALLS) | |
| 500- " " " 1"x6 T. & G. FLOORING (INSIDE WALLS) | |
| 2- 6 LIGHT SASH 9"x12" GLASS. | |
| 1- 5 PANEL STOCK DOOR 3'-0"x7'-0"x 1 3/4" | |
| 6- 1"x4"x6'-0" TRIM. | 3- 1/2"x2"x8'-0" STOPS. |
| 4- 1"x4"x6'-0" " | 1- 1/2"x2"x12'-0" " |
| 2- 1"x4"x12'-0" " | 2- 2"x8"x8'-0" GATE. |
| .5- 7/8"x4 1/2"x8'-0" " | 2- 2"x8"x10'-0" " |
| 4- 7/8"x4 1/2"x6'-0" " | 1- 2"x6"x6'-0" " |
| 3- 1 1/8"x6"x8'-0" SILL. | 1- 2"x10"x4'-0" " |

MISCELLANEOUS

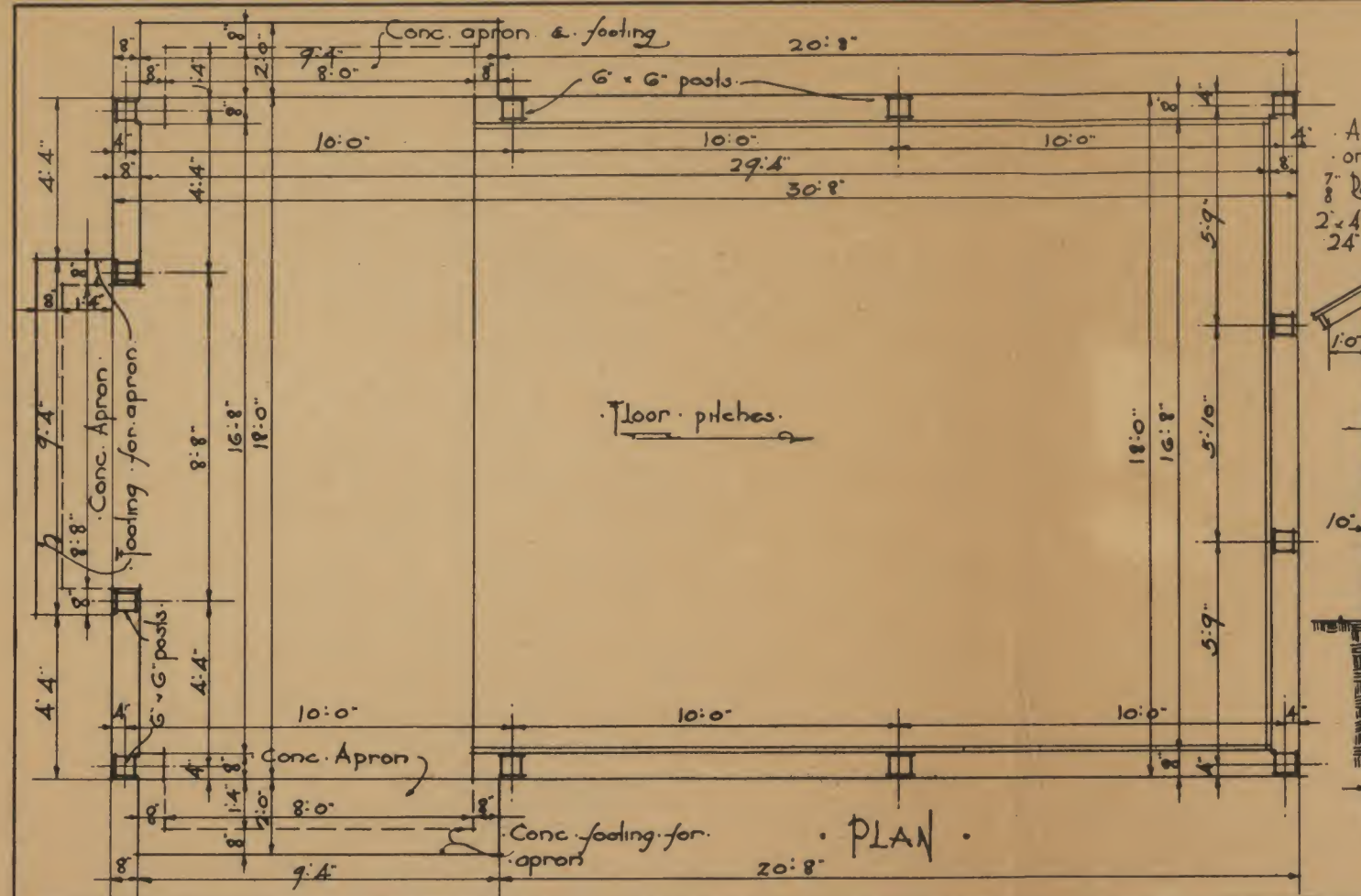
- 3- SQUARES ROOFING. 2- GUIDE ROLLERS.
1- MANGER DRAIN WITH PLUG.
1- 8" BELL TRAP. 14- SCREW EYES.
5- LIN. FT. 4" C.I. SOIL PIPE.
10- " " 2" GALV. PIPE. 36- FT. 5/16" DIAM ROPE.
1- DOOR LOCK SET. 2- SASH CATCHES.
1- PAIR 3 1/4" x 3 1/2" LOOSE PIN HINGES.
2- " 3" x 3" " " "
1- 8 FT. TRACK WITH BOLTS, BRACKETS, ETC.
2- AWNING PULLEYS FOR 5/16" DIAM. ROPE.
2- SCREW PULLEYS FOR 5/16" " "
14- 5/8" x 16" ANCHOR BOLTS.
1- BULL PEN GATE PANEL MANGER WITH STANCHION.
30- 16d. OD. NAILS. 15 LBS. 16d. NAILS. 12 LBS. 10d. NAILS.



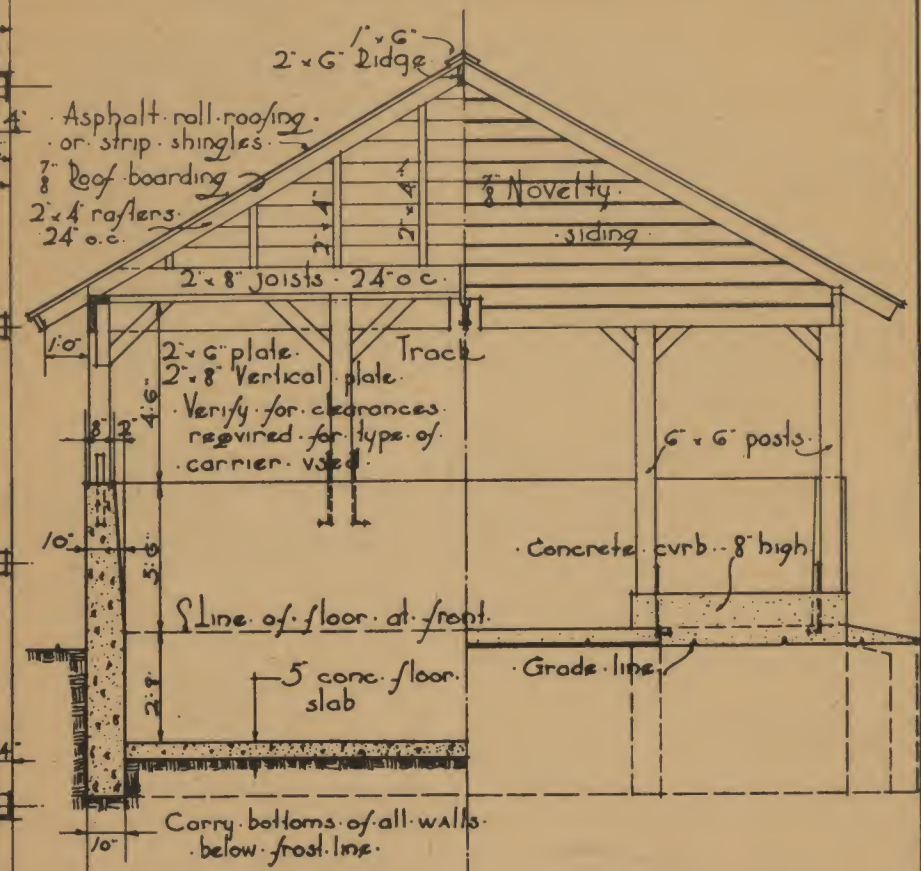
SECTION C-C

• CO-OPERATIVE • EXTENSION • WORK •
AGRICULTURE • & HOME • ECONOMICS •
• STATE • OF • MASS •
DEPT. OF AGRICULTURAL • ENGINEERING •
MASS • STATE • COLLEGE • AMHERST • MASS •
AND
U • S • D • A • CO-OPERATING •
• BULL • BARN •

MASS - 34	PLAN 501-C	SHEET 1 OF 1
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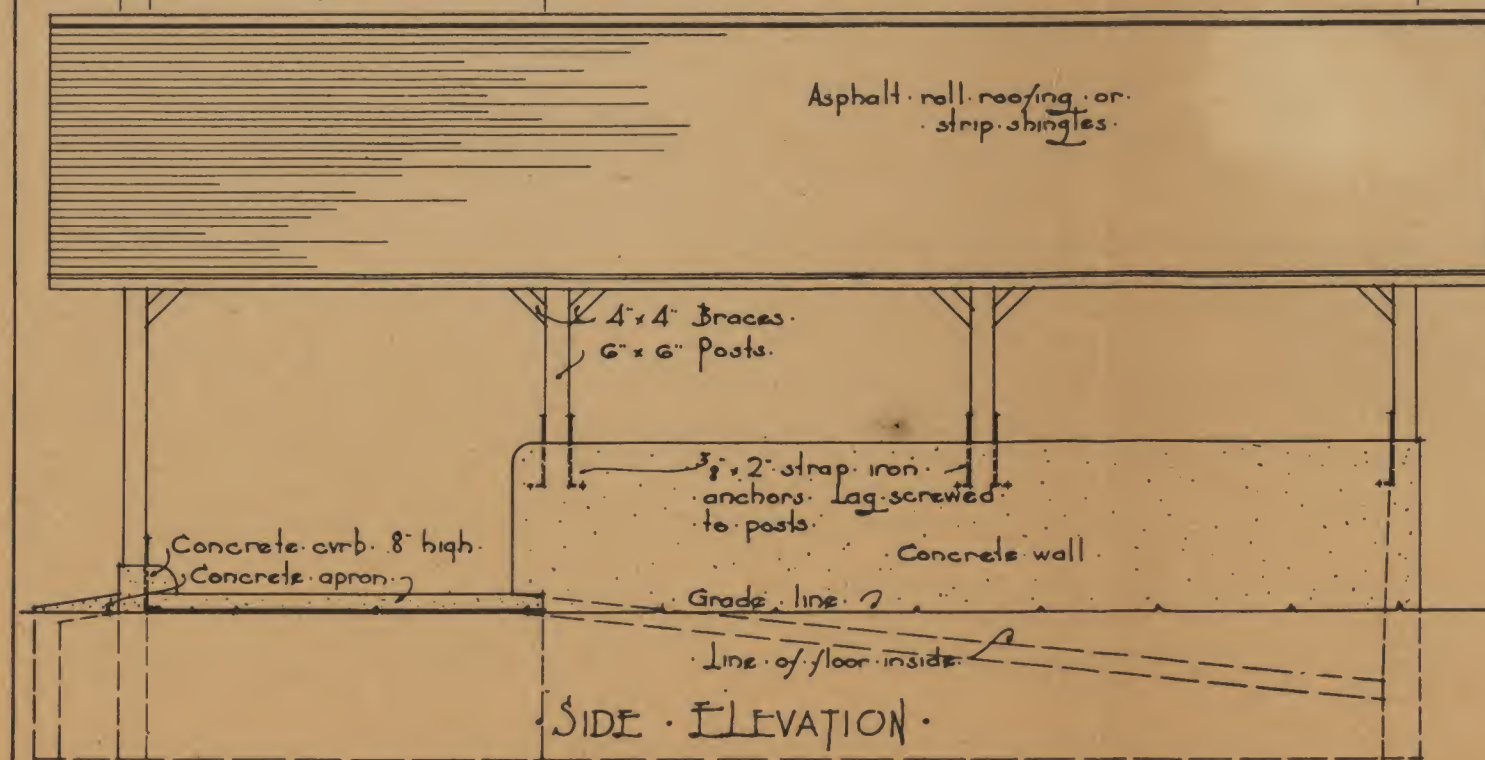


PLAN



ONE-HALF
CROSS
SECTION

ONE HALF
FRONT
ELEVATION



SIDE ELEVATION

CO-OPERATIVE EXTENSION WORK
AGRICULTURE & HOME ECONOMICS
STATE OF MASS.
DEPT. OF AGRICULTURAL ENGINEERING
MASS. STATE COLLEGE, AMHERST, MASS.
V. S. D. A. CO-OPERATING
MANURE PIT
MASS. 34 PLAN 549C SHEET 1 OF 1

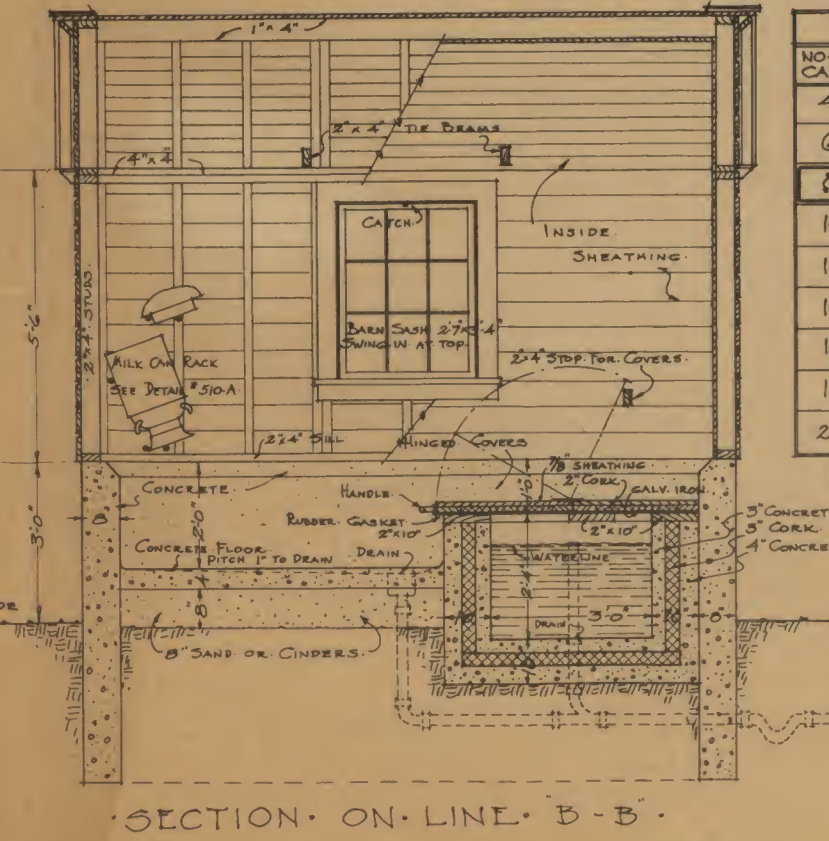
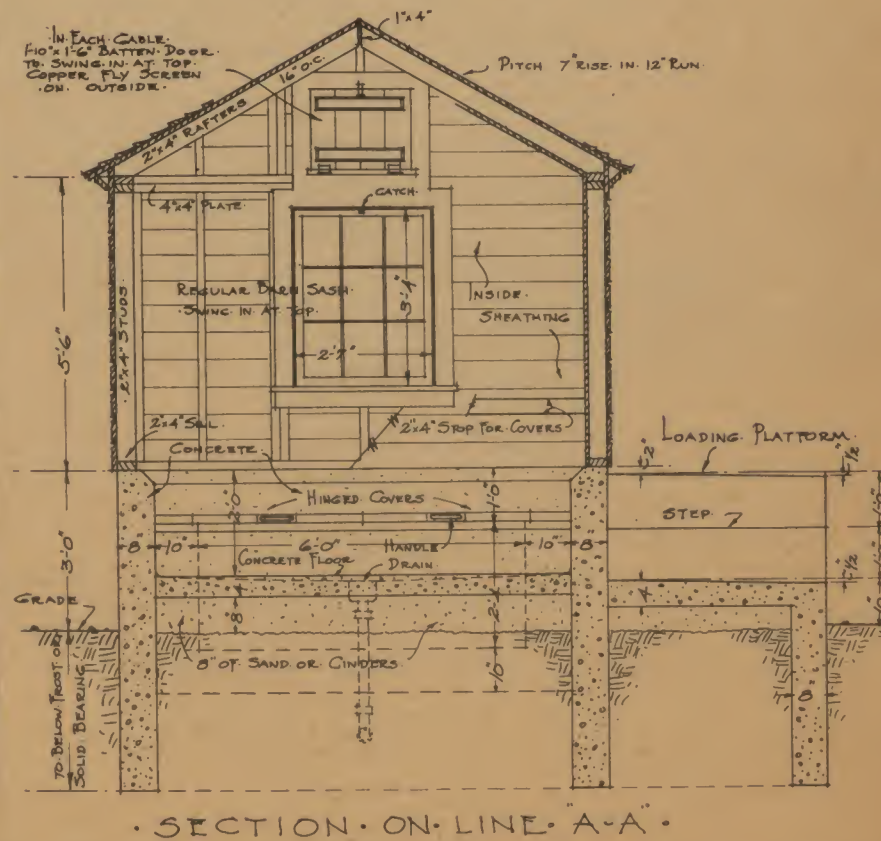
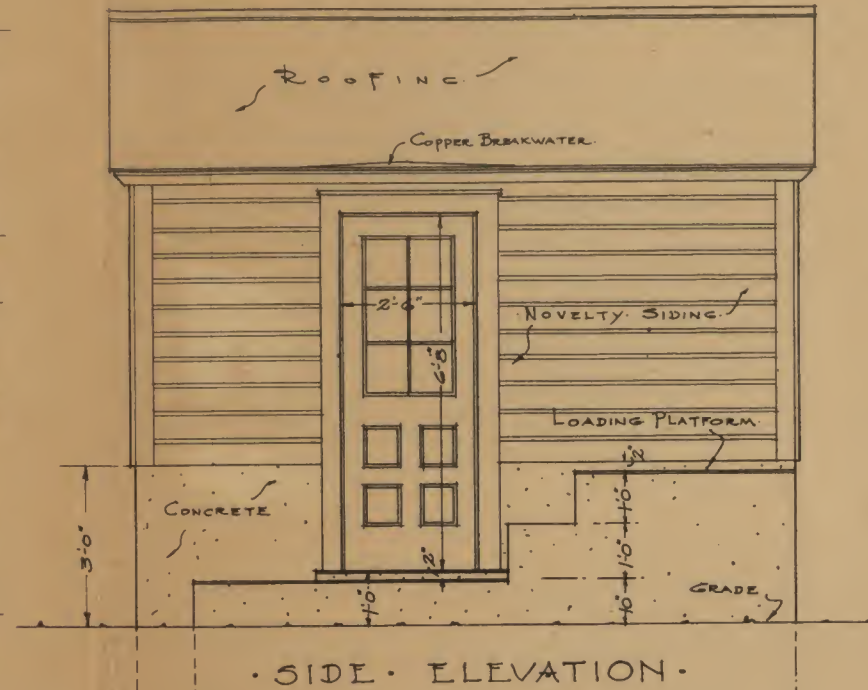
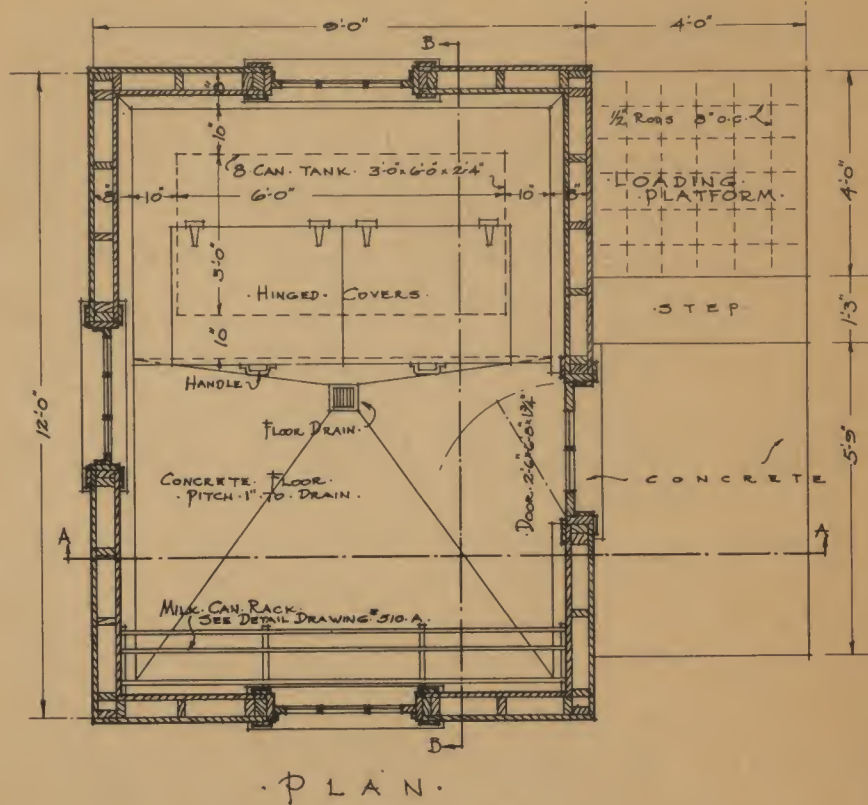
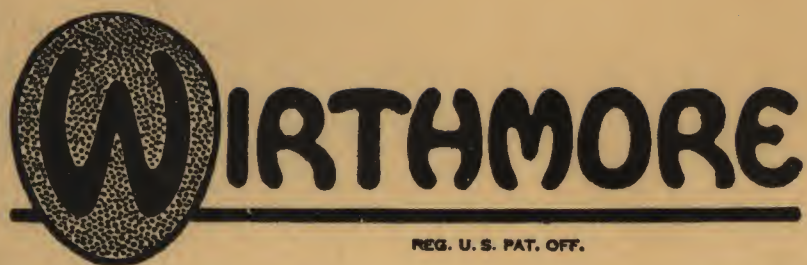


TABLE OF SIZES					
NO. OF CANS	INSIDE SIZE OF TANK	OUTSIDE SIZE OF BUILDING			
LENGTH	WIDTH	HEIGHT			
4	3'0"	3'0"	2'4"	6'0" x 10'0"	
6	4'6"	3'0"	2'4"	7'6" x 10'0"	
8	6'0"	3'0"	2'4"	9'0" x 12'0"	
10	7'6"	3'0"	2'4"	10'6" x 12'0"	
12	9'0"	3'0"	2'4"	12'0" x 12'0"	
14	10'6"	3'0"	2'4"	13'6" x 12'0"	
16	12'0"	3'0"	2'4"	15'0" x 12'0"	
18	13'6"	3'0"	2'4"	16'6" x 14'0"	
20	15'0"	3'0"	2'4"	18'0" x 14'0"	

NOTE:—
 RUN GABLES IN OPPOSITE DIRECTION FOR BUILDINGS LARGER THAN 12'0" x 12'0"
 THESE DRAWINGS SHOW BUILDING FOR 8 CAN. CAPACITY.

• CO-OPERATIVE EXTENSION WORK •
 AGRICULTURE & HOME ECONOMICS •
 STATE OF MASS. •
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 MASS. STATE COLLEGE AMHERST, MASS. •
 U. S. D. A. CO-OPERATING •
 • MILK HOUSE •
 MASS. 34 PLAN 503 C SHEET 1 OF 1.



REG. U. S. PAT. OFF.

DAIRY RATIONS

A New England *Quality* Product